

APPENDIX A – AIR QUALITY AND GLOBAL CLIMATE CHANGE IMPACT ANALYSIS



AIR QUALITY AND GLOBAL CLIMATE CHANGE IMPACT ANALYSIS

PECK WATER CONSERVATION IMPROVEMENT PROJECT

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

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PROJECT NO. 13032

JUNE 18, 2014

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ACRONYMS AND ABBREVIATIONS

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CO	Carbon monoxide
DPM	Diesel particulate matter
EPA	Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
MMT _{CO₂e}	Million metric tons of carbon dioxide equivalent
LST	Localized Significant Thresholds
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NO _x	Nitrogen Oxides
NO ₂	Nitrogen dioxide
O ₃	Ozone
PM	Particle matter
PM ₁₀	Particles that are less than 10 micrometers in diameter
PM _{2.5}	Particles that are less than 2.5 micrometers in diameter
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SO _x	Sulfur Oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Air Quality and Global Climate Change Impact Analysis has been completed to determine the air quality and global climate change impacts associated with the proposed Peck Water Conservation Improvement project (proposed project). The following is provided in this report:

- A description of the proposed project;
- A description of the atmospheric setting;
- A description of the criteria pollutants;
- A description of the air quality regulatory framework;
- A description of the air quality and greenhouse gas emissions thresholds including the California Environmental Quality Act (CEQA) significance thresholds;
- An analysis of the short-term construction related and long-term operational air quality and greenhouse gas emissions impacts; and
- An analysis of the conformity of the proposed project with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP).

1.2 Site Location and Study Area

The spreading basin is located in the Los Angeles River Watershed in the southeastern portion of the City of Arcadia. This portion of the City of Arcadia in which the spreading basin is located is a narrow strip of land surrounded by the City of Irwindale to the north and El Monte to the south.

The project site consists of a former gravel mining pit that spans over three quarter mile in length by a quarter mile in width. The spreading basin consists of two deep pits that combine to form one basin with a total storage capacity of 3,600 acre-feet. However, due to sediment accumulation, the current capacity is approximately 3,230 acre-feet. Under the jurisdiction of the Los Angeles County Flood Control District (LACFCD), the facility is one of the largest water conservation facilities that recharges the Main San Gabriel Ground Water Basin.

The nearest sensitive receptors consist of single-family residential units located on the north side of the basin and as near as 50 feet (15 meters) from the proposed project's activities. The project local study area and preferred haul route is shown in Figure 1.

According to the SCAQMD's MATES-III study, the southern portion of the project site has an estimated cancer risk of 946 in one million chance of cancer and the northern portion of the project site has an estimated cancer risk of 837 in one million chance of cancer. In comparison, the average cancer risk for all of Los Angeles County portion within the South Coast Air Basin (Basin) is 912 in one million. The increased cancer risk is primarily due to the proximity of Interstate 605 (I-605) to the project site.

1.3 Proposed Project Description

Over the years, storm flows have brought sediment into the basins, accumulating south of the Santa Anita Wash outlet and west of the Sawpit Wash outlet. The sediment accumulation at the mouth of Santa Anita Wash restricts water flows and causes a separation between the northern and southern portions of the spreading basin, decreasing the overall storage capacity. In addition the facility's percolation is currently limited due to the accumulated sediment. High uncontrolled flows from Santa Anita and Sawpit Washes

can cause the basin to fill up quickly and allow the water to be wasted through the Rio Hondo Channel to the ocean.

The proposed project will include the removal of accumulated sediment from the spreading basin, construction of a pump station located at the northeastern shore of the spreading basin, and construction of a pipeline that connects the outlet structure into the San Gabriel River. The proposed site plan is shown in Figure 2.

Sediment Removal

The proposed project will involve the excavation and removal of approximately 94,000 cubic yards of sediment to restore basin capacity, improve water flows and allow for the transport of water to the soft-bottom San Gabriel River. The spreading basin near the outlet of the Santa Anita Wash will be excavated to an elevation of 290 feet to achieve a capacity of 3,290 acre-feet. Prior to the removal of the sediment, the spreading basin will be drained to approximately 208 feet and the vegetation in the excavation area will be removed.

Construction staging for sediment excavation will be located on the western bank of the spreading basin immediately north of the Santa Anita Wash outlet. This area is located immediately adjacent to the excavation area within the spreading basin. Access to the construction staging area will be provided by a gated access road that connects to Peck Road. The gated access road begins adjacent to the northeastern corner of the spreading basin and travels along the northern and western shore of the basin before terminating at the staging area. When necessary, temporary access roads will be created from the existing access road into the basin.

It is estimated that removal of excavated sediment from the project site will be accomplished by transporting approximately 200 truck loads per day over 60 working days. Excavated sediment will be hauled away from the project site to one of the following sediment disposal sites; Peck Road Gravel Pit, Manning Pit Sediment Placement Site, or Azusa Land Reclamation. These sites are located in the cities of Irwindale and Azusa, approximately 2 to 7 miles east of the spreading basin. The potential haul routes to the sediment disposal sites are delineated in Figure 1.

Maintenance for the proposed project will require periodic sediment removal from the Santa Anita Wash outlet. Up to 2,000 cubic yards of sediment may need to be removed per year. It is anticipated that the hauling of sediment during maintenance will follow the same truck haul route.

Pump Station

The proposed project will involve the construction of a pump station on the eastern shore of the Peck Road Spreading Basin to transfer water to the San Gabriel River. The pump station will house two 225 horsepower electric motor pumps, electrical equipment, and connection to the intake structure. The pump station will be connected to an existing electrical service and an enclosed power transformer will be constructed adjacent to the pump station.

Pipeline

Pumped water from the basin will be conveyed to the San Gabriel River by an approximately 7,000-foot long pipeline connecting the two water bodies. The ductile iron pipeline will be placed 6 feet underground and have a diameter of 42 inches. The westernmost segment of the pipeline alignment will traverse the parking area of an industrial building and cross Peck Road. The pipeline alignment will then traverse Clark Street, 6 feet south of the roadway centerline. The remainder of the pipeline alignment will traverse undeveloped land south of the gravel mining pit located east of the spreading basin within the

City of Irwindale. The eastern terminus of the pipeline to the San Gabriel River will include an outlet structure with minor riprap at the outfall.

Project Schedule

The proposed project is expected to occur between approximately summer of 2015 and fall of 2016. Excavation activities are anticipated to be completed in 60 working days. Construction activities will take place between the hours of 7:00 a.m. to 7:00 p.m. on Monday through Friday.



2.0 ATMOSPHERIC SETTING

The project site is located within the southeastern portion of Los Angeles County, which is part of the South Coast Air Basin (Basin) that includes all of Orange County as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the South Coast Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter. The project site is located toward the northeast portion of the South Coast Air Basin near the foot of the San Bernardino Mountains, which define the eastern boundary of the South Coast Air Basin.

The climate of southeastern Los Angeles County, technically called an interior valley subclimate of the Southern California's Mediterranean-type climate, is characterized by hot dry summers, mild moist winters with infrequent rainfall, moderate afternoon breezes, and generally fair weather. Occasional periods of strong Santa Ana winds and winter storms interrupt the otherwise mild weather pattern. The clouds and fog that form along the area's coastline rarely extend as far inland as eastern Los Angeles County. When morning clouds and fog form, they typically burn off quickly after sunrise. The most important weather pattern from an air quality perspective is associated with the warm season airflow across the populated areas of the Basin. This airflow brings polluted air into eastern Los Angeles County late in the afternoon. This transport pattern creates unhealthy air quality that may extend to the project site particularly during the summer months.

Winds are an important parameter in characterizing the air quality environment of a project site because they both determine the regional pattern of air pollution transport and control the rate of dispersion near a source. Daytime winds in eastern Los Angeles County are usually light breezes from off the coast as air moves regionally onshore from the cool Pacific Ocean to the warm Mojave Desert interior of Southern California. These winds allow for good local mixing, but as discussed above, these coastal winds carry significant amounts of industrial and automobile air pollutants from the densely urbanized western portion of the Basin into the interior valleys which become trapped by the mountains that border the eastern edge of the Basin.

In the summer, strong temperature inversions may occur that limit the vertical depth through which air pollution can be dispersed. Air pollutants concentrate because they cannot rise through the inversion layer and disperse. These inversions are more common and persistent during the summer months. Over time, sunlight produces photochemical reactions within this inversion layer that creates ozone, a particularly harmful air pollutant. Occasionally, strong thermal convections occur which allows the air pollutants to rise high enough to pass over the mountains and ultimately dilute the smog cloud.

In the winter, light nocturnal winds result mainly from the drainage of cool air off of the mountains toward the valley floor while the air aloft over the valley remains warm. This forms a type of inversion known as a radiation inversion. Such winds are characterized by stagnation and poor local mixing and trap pollutants such as automobile exhaust near their source. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the project vicinity.

The temperature and precipitation levels for the City of Arcadia are shown below in Table A. Table A shows that August is typically the warmest month and December is typically the coolest month of the year. Rainfall in the project area varies considerably in both time and space. Almost all annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table A – Arcadia Monthly Climate Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Maximum Temperature (°F)	67	68	70	73	76	80	85	87	85	79	73	67
Avg. Minimum Temperature (°F)	45	47	50	53	57	61	65	65	63	57	49	44
Avg. Total Precipitation (in.)	3.68	4.66	3.00	1.10	0.38	0.15	0.04	0.07	0.33	0.78	1.45	2.42

Source: <http://www.weather.com/weather/wxclimatology/monthly/graph/USCA0040>

3.0 POLLUTANTS

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

3.1 Criteria Pollutants

The criteria pollutants consist of: ozone, nitrogen oxides, carbon monoxide, sulfur oxides, lead, and particulate matter. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants “criteria” air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants.

Nitrogen Oxides

Nitrogen Oxides (NO_x) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NO_x are colorless and odorless, concentrations of nitrogen dioxide (NO₂) can often be seen as a reddish-brown layer over many urban areas. NO_x form when fuel is burned at high temperatures, as in a combustion process. The primary manmade source of NO_x are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NO_x reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO₂, which cause respiratory problems. NO_x and the pollutants formed from NO_x can be transported over long distances, following the patterns of prevailing winds. Therefore controlling NO_x is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

Ozone

Ozone is not usually emitted directly into the air but in the vicinity of ground-level is created by a chemical reaction between NO_x and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NO_x and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NO_x and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NO_x and VOC emissions.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes approximately 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath

a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

Sulfur Oxides

Sulfur Oxide (SOx) gases are formed when fuel containing sulfur, such as coal and oil is burned, as well as from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

Lead

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure of fetuses, infants and children to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Particulate Matter

Particle matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. PM is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM₁₀) are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM_{2.5}) have been designated as a subset of PM₁₀ due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

3.2 Other Pollutants of Concern

Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different toxic air contaminants. The most important of these TACs, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and

acetaldehyde. Public exposure to TACs can result from emissions from normal operations as well as from accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

TACs are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to the 2005 *California Almanac of Emissions and Air Quality*, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). DPM is a subset of PM_{2.5} because the size of diesel particles are typically 2.5 microns and smaller. The identification of DPM as a TAC in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in DPM by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of DPM as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to DPM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

Asbestos

Asbestos is listed as a TAC by CARB and as a Hazardous Air Pollutant by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in Orange County. The nearest likely locations of naturally occurring asbestos, as identified in the *General Location Guide for Ultramafic Rocks in California*, prepared by the California Division of Mines and Geology, is located in Santa Barbara County. Due to the distance to the nearest natural occurrence of asbestos, the project site is not likely to contain asbestos.

3.3 Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHGs), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO₂), methane (CH₄), ozone (O₃), water vapor, nitrous oxide (N₂O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas

emissions, followed by electricity generation. Emissions of CO₂ and N₂O are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO₂, where CO₂ is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

Water Vapor

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to “hold” more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a “positive feedback loop.” The extent to which this positive feedback loop will continue is unknown as there is also dynamics that put the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth’s surface and heat it up).

Carbon Dioxide

The natural production and absorption of CO₂ is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid 1700s, each of these activities has increased in scale and distribution. CO₂ was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC) indicates that concentrations were 379 ppm in 2005, an increase of more than 30 percent. Left unchecked, the IPCC projects that concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. This could result in an average global temperature rise of at least two degrees Celsius or 3.6 degrees Fahrenheit.

Methane

CH₄ is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO₂. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO₂, N₂O, and Chlorofluorocarbons (CFCs)). CH₄ has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide

Concentrations of N₂O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration of this GHG was documented at 314 parts per billion (ppb). N₂O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In

addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N₂O is also commonly used as an aerosol spray propellant (i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and race cars).

Chlorofluorocarbons

CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C₂H₆) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. They were used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF₃), HFC-134a (CF₃CH₂F), and HFC-152a (CH₃CHF₂). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF₄) and hexafluoroethane (C₂F₆). Concentrations of CF₄ in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

Sulfur Hexafluoride

Sulfur Hexafluoride (SF₆) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF₆ has the highest global warming potential of any gas evaluated; 23,900 times that of CO₂. Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Aerosols

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

3.4 Global Warming Potential

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to the reference gas, CO₂. One teragram of carbon dioxide equivalent (Tg CO₂e) is essentially the emissions of the gas multiplied by the global warming potential. One teragram is equal to one million metric tons. The carbon dioxide equivalent is a good way to assess emissions because it gives weight to the GWP of the gas. A summary of the atmospheric lifetime and the GWP of selected gases is summarized in Table B. As shown in Table B, the GWP of GHGs ranges from 1 to 23,900.

Table B – Global Warming Potentials and Atmospheric Lifetimes

Gas	Atmospheric Lifetime (years)	Global Warming Potential* (100 Year Horizon)
Carbon Dioxide	50-200	1
Methane	12 ± 3	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane	50,000	6,500
PFC: Hexafluoroethane	10,000	9,200
Sulfur Hexafluoride	3,200	23,900

* Compared to the same quantity of CO₂ emissions.

Source: United States Environmental Protection Agency, 2006.

4.0 AIR QUALITY MANAGEMENT

4.1 Regulatory Setting

The air quality at the project site is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality are discussed below.

International

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global climate change and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—CFCs, halons, carbon tetrachloride, and methyl chloroform—were to be phased out, with the first three by the year 2000 and methyl chloroform by 2005.

Federal – United States Environmental Protection Agency

The United States Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. NAAQS pollutants were identified using medical evidence and are shown below in Table C.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The SIP must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

Table C – State and Federal Criteria Pollutant Standards

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone (O ₃)	0.09 ppm / 1-hour 0.07 ppm / 8-hour	0.075 ppm, / 8-hour	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm / 1-hour 9.0 ppm / 8-hour	35.0 ppm / 1-hour 9.0 ppm / 8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO ₂)	0.18 ppm / 1-hour 0.030 ppm / annual	100 ppb / 1-hour 0.053 ppm / annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO ₂)	0.25 ppm / 1-hour 0.04 ppm / 24-hour	75 ppb / 1-hour 0.14 ppm/annual	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM ₁₀)	50 µg/m ³ / 24-hour 20 µg/m ³ / annual	150 µg/m ³ / 24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter (PM _{2.5})	12 µg/m ³ / annual	35 µg/m ³ / 24-hour 15 µg/m ³ / annual	
Sulfates	25 µg/m ³ / 24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage.
Lead	1.5 µg/m ³ / 30-day	0.15 µg/m ³ /3-month rolling	(a) Learning disabilities; and (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

Source: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf> .

As indicated below in Table D, the Basin has been designated by EPA as a non-attainment area for ozone (O₃) and suspended particulates (PM₁₀ and PM_{2.5}) and partial non-attainment for lead. Currently, the Basin is in attainment with the ambient air quality standards for carbon monoxide (CO), sulfur dioxide (SO₂), and nitrogen dioxide (NO₂).

Table D – South Coast Air Basin Attainment Status

Pollutant	Averaging Time	National Standards Attainment Date ¹	California Standards ²
1979 1-Hour Ozone (O ₃) ³	1-Hour (0.12 ppm)	Nonattainment (Extreme) 11/15/2010 (not attained)	Nonattainment
1997 8-Hour Ozone (O ₃) ⁴	8-Hour (0.08 ppm)	Nonattainment (Extreme) 6/15/2024	
2008 8-Hour Ozone (O ₃)	8-Hour (0.075 ppm)	Nonattainment (Extreme) 12/31/2032	
Carbon Monoxide (CO)	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance) 6/11/2007 (attained)	Maintenance
Nitrogen Dioxide (NO ₂) ⁵	1-Hour (100 ppb)	Unclassifiable/Attainment Attained	Nonattainment
	Annual (0.053 ppm)	Attainment (Maintenance) 9/22/1998	
Sulfur Dioxide (SO ₂) ⁶	1-Hour (75 ppb)	Designation Pending /Pending	Attainment
	24-Hour (0.14 ppm)	Unclassifiable/Attainment	
	Annual (0.03 ppm)	3/19/1979 (attained)	
PM ₁₀	24-Hour (150 µg/m ³)	Nonattainment (Serious) 12/31/2006 (redesignation submitted) ⁷	Nonattainment
PM _{2.5}	24-Hour (35 µg/m ³)	Nonattainment 12/14/2014	Nonattainment
	Annual (15.0 µg/m ³)	Nonattainment 4/5/2015	
Lead (Pb)	3-Months Rolling (0.15 µg/m ³)	Nonattainment (Partial) ⁸ 12/31/2015	Nonattainment

¹ Obtained from Draft 2012 AQMP, SCAQMD, 2012. A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration.

² Obtained from <http://www.arb.ca.gov/design/adm/adm.htm>.

³ 1-hour O₃ standard (0.12 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data has some continuing obligations under the former standard.

⁴ 1997 8-hour O₃ standard (0.08 ppm) was reduced (0.075 ppm), effective May 27, 2008; the 1997 O₃ standard and most related implementation rules remain in place until the 1997 standard is revoked by U.S. EPA.

⁵ New NO₂ 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO₂ standard retained.

⁶ The 1971 annual and 24-hour SO₂ standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO₂ 1-hour standard. Area designations are expected in 2012, with Basin designated Unclassifiable/Attainment

⁷ Annual PM₁₀ standard was revoked, effective December 18, 2006; redesignation request to Attainment of the 24-hour PM₁₀ standard is pending with U.S. EPA

⁸ Partial Nonattainment designation – Los Angeles County portion of Basin only.

In 2011, the Basin exceeded federal standards for either ozone or PM_{2.5} at one or more locations on a total of 124 days, based on the current federal standards for 8-hour ozone and 24-hour PM_{2.5}. Despite substantial improvements in air quality over the past few decades, some air monitoring stations in the Basin still exceed the NAAQS for ozone more frequently than any other stations in the U.S. In 2011, three of the top five stations that exceeded the 8-hour ozone NAAQS were located in the Basin (Central San Bernardino Mountains, East San Bernardino Valley, and Metropolitan Riverside County).

PM_{2.5} in the Basin has improved significantly in recent years, with 2010 and 2011 being the cleanest years on record. In 2011, only one station in the Basin (Metropolitan Riverside County at Mira Loma) exceeded the annual PM_{2.5} NAAQS and the 98th percentile form of the 24-hour PM_{2.5} NAAQS, as well as the 3-year design values for these standards. Basin-wide, the federal PM_{2.5} 24-hour standard level was exceeded in 2011 on 17 sampling days.

The Basin is currently in attainment for the federal standards for SO₂, CO, and NO₂. While the concentration level of the new 1-hour NO₂ federal standard (100 ppb) was exceeded in the Basin at two stations (Central Los Angeles and Long Beach) on the same day in 2011, the NAAQS NO₂ design value has not been exceeded. Therefore, the Basin remains in attainment of the NO₂ NAAQS.

The EPA designated the Los Angeles County portion of the Basin as nonattainment for the recently revised (2008) federal lead standard (0.15 µg/m³, rolling 3-month average), due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of Industry exceeding the new standard in the 2007-2009 period of data used. For the most recent 2009-2011 data period, only one of these stations (Vernon) still exceeded the lead standard.

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO₂ and other greenhouse gases as pollutants under the federal Clean Air Act (CAA).

In response to the FY2008 Consolidations Appropriations Act (H.R. 2764; Public Law 110-161), EPA proposed a rule on March 10, 2009 that requires mandatory reporting of GHG emissions from large sources in the United States. On September 22, 2009, the Final Mandatory Reporting of GHG Rule was signed and published in the Federal Register on October 30, 2009. The rule became effective on December 29, 2009. This rule requires suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions will not themselves impose any requirements on industry or other entities. However, it is a prerequisite to finalizing the EPA's proposed GHG emission standards for light-duty vehicles, which were jointly proposed by the EPA and Department of Transportation on September 15, 2009.

State – California Air Resources Board

The California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The CAAQS for criteria pollutants are shown above in Table B. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and

various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The South Coast Air Basin has been designated by the CARB as a non-attainment area for ozone, PM₁₀, PM_{2.5} and lead. Currently, the South Coast Air Basin is in attainment with the ambient air quality standards for CO, SO₂, NO₂, and sulfates and is unclassified for visibility reducing particles and Hydrogen Sulfide.

On June 20, 2002, the CARB revised the PM₁₀ annual average standard to 20 µg/m³ and established an annual average standard for PM_{2.5} of 12 µg/m³. These standards were approved by the Office of Administrative Law in June 2003 and are now effective. On September 27, 2007 CARB approved the South Coast Air Basin and the Coachella Valley 2007 Air Quality Management Plan for Attaining the Federal 8-hour Ozone and PM_{2.5} Standards. The plan projects attainment for the 8-hour Ozone standard by 2024 and the PM_{2.5} standard by 2015.

On December 12, 2008 the CARB adopted Resolution 08-43, which limits NO_x, PM₁₀ and PM_{2.5} emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order R-09-010 was adopted that codified Resolution 08-43 into Section 2025, title 13 of the California Code of Regulations. This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4 Final) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. This regulation also provides a few exemptions including a onetime per year 3-day pass for trucks registered outside of California.

CARB is also responsible for regulations pertaining to Toxic Air Contaminants (TACs). The Air Toxics “Hot Spots” Information and Assessment Act (Assembly Bill [AB] 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release in California. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

CARB also proposed interim statewide CEQA thresholds for GHG emissions and released *Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act*, on October 24, 2008. The State currently has no regulations that establish ambient air quality standards for GHGs. However, the State has passed laws directing CARB to develop actions to reduce GHG emissions, which are listed below.

Assembly Bill 1493

California Assembly Bill 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a “waiver” request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO₂ and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the “waiver” request. On January 21, 2009, CARB submitted a letter to the EPA Administrator regarding the State’s request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-3-05

The California Governor issued Executive Order S 3-05, GHG Emission, in June 2005, which established the following reduction targets:

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- 2010: Reduce greenhouse gas emissions to 2000 levels;
 - 2020: Reduce greenhouse gas emissions to 1990 levels;
 - 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Assembly Bill 32

In 2006, the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and utilize best management practices that are technologically feasible and cost effective.

On December 6, 2007 CARB released the calculated Year 1990 GHG emissions of 427 million metric tons of CO₂e (MMTCO₂e). The 2020 target of 427 MMTCO₂e requires the reduction of 169 MMTCO₂e, or approximately 30 percent from the State's projected 2020 business as usual emissions of 596 MMTCO₂e and the reduction of 42 MMTCO₂e, or almost 10 percent from the 2002-2004 average GHG emissions. Under AB 32, CARB was required to adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 cap by 2020. Early measures CARB took to lower GHG emissions included requiring operators of the largest industrial facilities that emit 25,000 metric tons of CO₂ in a calendar year to submit verification of GHG emissions by December 1, 2010. The CARB Board also approved nine discrete early action measures that include regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port operations and other sources, all of which became enforceable on or before January 1, 2010.

On December 11, 2008 the CARB Board approved a Scoping Plan, with final adoption May 11, 2009 that proposed a variety of measures including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, a market-based cap-and-trade system, and a fee regulation to fund the program. In current pending litigation, *Association of Irrigated Residents v. California Air Resources Board*, a California State trial court found that the analysis of the alternatives identified in the AB 32 Scoping Plan Functional Equivalent Document (FED) was not sufficient for informed decision-making and public review under CEQA. In response, CARB has appealed the decision. In addition, CARB prepared the *Supplement to the AB 32 Scoping Plan Functional Equivalent Document*, June 13, 2011. On August 24, 2011 CARB recertified the complete AB 32 Scoping Plan Functional Equivalent Environmental Document revised by the Final Supplement. In December, 2011 the Final Supplement was accepted as sufficient to fulfill the trial court's March order.

Senate Bill 1368

Senate Bill 1368 (SB 1368) is the companion Bill of AB 32 and was adopted September, 2006. SB 1368 requires that the California Public Utilities Commission (CPUC) establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007 and for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation states that all

electricity provided to the State, including imported electricity, must be generated by plants that meet the standards set by CPUC and California Energy Commission (CEC).

Executive Order S-1-07

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet annually beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are “back-loaded”, with more reductions required in the last five years, than during the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

Senate Bill 97

Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the State CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporated GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative

factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.

- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that “to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation.”
- OPR’s emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bills 1078, 107, and X1-2 and Executive Orders S-14-08 and S-21-09

Senate Bill 1078 (SB 1078) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) changed the target date to 2010. Executive Order S-14-08 was signed on November 2008 and expands the State’s Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 375

Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO’s sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as “transit priority projects.”

The proposed project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita

GHG emissions levels by 2035. On April 4, 2012, SCAG adopted the *2012-2035 Regional Transportation Plan / Sustainable Communities Strategy* (RTP/SCS), which meets the CARB emission reduction requirements. The Housing Element Update is required by the State to be completed within 18 months after RTP/SCS adoption or by October 2013.

Senate Bills 939 and 1374

Senate Bill 939 (SB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: *California's Energy Efficiency Standards for Residential and Nonresidential Buildings* (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009.

California Code of Regulations (CCR) Title 24, Part 11

CCR Title 24, Part 11: *California Green Building Standards* (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and construction of new, nonresidential buildings over 10,000 square feet.

Regional

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District

SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect

sources. It has responded to this requirement by preparing a sequence of AQMPs. A revised draft of the 2012 AQMP was released on September, 2012, was adopted by the SCAQMD Board on December 7, 2012, and was adopted by CARB via Resolution 13-3 on January 25, 2013. The 2012 AQMP was prepared in order to meet the federal Clean Air Act requirement that all 24-hour PM_{2.5} non-attainment areas prepare a SIP, that were required to be submitted to the U.S. EPA by December 14, 2012 and demonstrate attainment with the 24-hour PM_{2.5} standard by 2014. The 2012 AQMP demonstrates attainment of the federal 24-hour PM_{2.5} standard by 2014 in the Basin through adoption of all feasible measures, and therefore, no extension of the attainment date is needed.

The 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023, through implementation of future improvements in control techniques and technologies. These “black box” emissions reductions represent 65 percent of the remaining NO_x emission reductions by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NO_x control measures have been provided in this AQMP even though the primary purpose of this AQMP is to show compliance with 24-hour PM_{2.5} emissions standards.

The 2012 AQMP is designed to satisfy the California Clean Air Act’s (CCAA) emission reductions of five percent per year or adoption of all feasible measures requirements and fulfill the EPA’s requirement to update transportation conformity emissions budgets based on the latest approved motor vehicle emissions model and planning assumptions. The 2012 AQMP updates and revises the previous 2007 AQMP. The 2012 AQMP was prepared to comply with the Federal and State CCAA and amendments, to accommodate growth, to reduce the high pollutant levels in the Basin, to meet Federal and State ambient air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. The purpose of the 2012 AQMP for the Basin is to set forth a comprehensive program that will lead this area into compliance with all federal and state air-quality planning requirements.

The 2012 AQMP builds upon the approaches taken in the 2007 AQMP for the attainment of federal PM and ozone standards, and highlights the significant amount of reductions needed and the need to engage in interagency coordinated planning of mobile sources to meet all of the federal criteria pollutant standards. Compared with the 2007 AQMP, the 2012 AQMP utilizes revised emissions inventory projections that use 2008 as the base year. On-road emissions are calculated using CARB EMFAC2011 emission factors and the transportation activity data provided by SCAG from their RTP/SCS. Off-road emissions were updated using CARB’s 2011 In-Use Off-Road Fleet Inventory Model. Since the 2007 AQMP was finalized new area source categories such as liquid propane gas (LPG) transmission losses, storage tank and pipeline cleaning and degassing, and architectural colorants, were created and included in the emissions inventories. The 2012 AQMP also includes analysis of several additional sources of GHG emissions such as landfills and could also assist in reaching the GHG target goals in the AB32 Scoping Plan.

The control measures in the 2012 AQMP consist of three components: 1) Basin-wide and episodic short-term PM_{2.5} measures; 2) Section 182(e)(5) implementation measures; and 3) Transportation control measures. Many of the control measures are not based on command and control regulations, but instead focus on incentives, outreach, and education to bring about emissions reductions through voluntary participation and behavioral changes. More broadly, a transition to zero- and near-zero emission technologies is necessary to meet 2023 and 2032 air quality standards and 2050 climate goals. Many of the same technologies will address both air quality and climate needs.

Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the Basin. Instead, this is controlled through local jurisdictions in accordance to the California Environmental Quality Act (CEQA). In order to assist local jurisdictions with air quality compliance

issues the *CEQA Air Quality Handbook* (SCAQMD CEQA Handbook), prepared by SCAQMD, 1993, with the most current updates found at <http://www.aqmd.gov/ceqa/hdbk.html>, was developed in accordance with the projections and programs of the AQMP. The purpose of the SCAQMD CEQA Handbook is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The SCAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the Basin, and adverse impacts will be minimized.

In order to assist local agencies with direction on GHG emissions, the SCAQMD organized a working group and adopted Rules 2700, 2701, 2702, and 3002 which are described below.

SCAQMD Working Group

Since neither CARB nor the OPR has developed GHG emissions threshold, the SCAQMD formed a Working Group to develop significance thresholds related to GHG emissions. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that either provides a quantitative annual thresholds of 3,500 MTCO₂e for residential uses, 1,400 MTCO₂e for commercial uses, and 3,000 MTCO₂e for mixed uses. An alternative annual threshold of 3,000 MTCO₂e for all land use types is also proposed.

Rules 2700 and 2701

On December 5, 2008, the SCAQMD adopted Rules 2700 and 2701, which establishes the administrative structure for a voluntary program designed to quantify GHG emission reductions. Rule 2700 establishes definitions for the various terms used in Regulation XXVII - Climate Change. Rule 2701 provides specific protocols for private parties to follow to generate certified GHG emission reductions for projects within the district. Approved protocols include forest projects, urban tree planting, and manure management. The SCAQMD is currently developing additional protocols for other reduction measures. For a GHG emission reduction project to qualify, it must be verified and certified by the SCAQMD Executive Officer, who has 60 days to approve or deny the Plan to reduce GHG emissions. Upon approval of the Plan, the Executive Officer issues required to issue a certified receipt of the GHG emission reductions within 90 days.

Rule 2702

The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the Governing Board. Priority will be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the cap-and-trade program identified for implementation in CARB's Scoping Plan, or a Federal cap and trade program.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With

respect to air quality planning, SCAG has prepared the RTP/SCS and *Regional Transportation Improvement Plan* (RTIP), which addresses regional development and growth forecasts. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The RTP/SCS, RTIP, and AQMP are based on projections originating within the City and County General Plans.

Local Jurisdictions

Local jurisdictions, such as the Cities of Arcadia, El Monte and Irwindale, have the authority and responsibility to reduce air pollution through their police power and decision-making authority. Specifically, each City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. Each City is also responsible for the implementation of transportation control measures as outlined in the 2007 AQMP and 2012 AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, each City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

In accordance with CEQA requirements, each City does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the City and region will meet federal and state standards. Instead, each City relies on the expertise of the SCAQMD and utilizes the SCAQMD CEQA Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

4.2 Monitored Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Basin are provided in the 2012 Air Quality Management Plan, prepared by SCAQMD, December 2012, indicate that collectively, mobile sources account for 59 percent of the VOC, 88 percent of the NO_x emissions and 40 percent of directly emitted PM_{2.5}, with another 10 percent of PM_{2.5} from road dust.

The SCAQMD has divided the Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project site is located in the East San Gabriel Valley Monitoring Area (Area 9), which covers the area from Sierra Madre in the west to State Route 57 in the east. The nearest air monitoring station to the project site is the Azusa Monitoring Station (Azusa Station). The Azusa Station is located approximately 5.2 miles northeast of the Peck Road Spreading Basin at 1803 N. Loren Avenue, Azusa. Table E presents the monitored pollutant levels from the Azusa Station. However, it should be noted that due to the air monitoring station distance from the project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the project site.

Table E – Local Area Air Quality Monitoring Summary

Pollutant (Standard)	Year ¹		
	2011	2012	2013
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.111	0.134	0.115
Days > CAAQS (0.09 ppm)	13	18	7
Maximum 8-Hour Concentration (ppm)	0.092	0.095	0.085
Days > NAAQS (0.08 ppm)	12	10	6
Days > CAAQs (0.070 ppm)	19	20	15
Carbon Monoxide:			
Maximum 1-Hour Concentration (ppm)	2.4	1.8	1.4
Days > NAAQS (20 ppm)	0	0	0
Maximum 8-Hour Concentration (ppm)	1.36	1.13	N/D
Days > NAAQS (9 ppm)	0	0	0
Nitrogen Dioxide:			
Maximum 1-Hour Concentration (ppb)	79.5	71.8	76.8
Days > NAAQS (100 ppb)	0	0	0
Inhalable Particulates (PM₁₀):			
Maximum 24-Hour California Measurement (ug/m ³)	65	78	76
Days > NAAQS (150 ug/m ³)	0	0	0
Days > CAAQS (50 ug/m ³)	8	6	6
Annual Arithmetic Mean (AAM) (ug/m ³)	32.7	30.3	33.0
Annual > NAAQS (50 ug/m ³)	No	No	No
Annual > CAAQS (20 ug/m ³)	Yes	Yes	Yes
Ultra-Fine Particulates (PM_{2.5}):			
Maximum 24-Hour National Measurement (ug/m ³)	94.6	39.6	29.6
Days > NAAQS (35 ug/m ³)	2	1	0
Annual Arithmetic Mean (AAM) (ug/m ³)	N/D	N/D	N/D
Annual > NAAQS (15 ug/m ³)	N/D	N/D	N/D
Annual > CAAQS (12 ug/m ³)	N/D	N/D	N/D

Notes: Exceedance of standards are listed in **bold**. CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion; N/D = no data available.

¹ Data obtained from Azusa Station.

Source: <http://www.arb.ca.gov/adam/>

The monitoring data presented in Table E shows that ozone and PM₁₀ and PM_{2.5} are the air pollutants of primary concern in the project area.

Ozone

During the 2011 to 2013 monitoring period, the State 1-hour concentration standard for ozone has been exceeded between 7 and 18 days each year at the Azusa Station. The State 8-hour ozone standard has been exceeded between 15 and 20 days each year over the past three year period at the Azusa Station. The Federal 8-hour ozone standard has been exceeded between 6 and 12 days each year over the past three years at the Azusa Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO₂, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the

oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

Carbon Monoxide

CO is another important pollutant that is due mainly to motor vehicles. The Azusa Station did not record an exceedance of the state or federal 1-hour or 8-hour CO standards for the last three years.

Nitrogen Dioxide

The Azusa Station did not record an exceedance of the State or Federal NO₂ standards for the last three years.

Particulate Matter

The State 24-hour concentration standard for PM₁₀ has been exceeded between 6 and 8 days each year over the past three years at the Azusa Station. Over the past three years the Federal 24-hour standard for PM₁₀ has not been exceeded at the Azusa Station. The annual PM₁₀ concentration at the Azusa Station has exceeded the State's standard for the past three years and has not exceeded the Federal standard over the past three years.

The Federal 24 hour standard for PM_{2.5} was exceeded between 0 and 2 days each year over the past three years at the Azusa Station. No data was available on the annual average PM_{2.5} concentrations at the Azusa Station over the past three year period. Particulate levels in the area are due to natural sources, grading operations, and motor vehicles.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM₁₀ and PM_{2.5}). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM₁₀ and PM_{2.5}. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

5.0 AIR QUALITY STANDARDS

5.1 Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominate pollution generators in the basin, often occurs hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table E.

Table F – SCAQMD Regional Pollutant Emission Thresholds of Significance

	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SOx	PM ₁₀	PM _{2.5}
Construction	75	100	550	150	150	55
Operation	55	55	550	150	150	55

Source: <http://www.aqmd.gov/ceqa/handbook/signthres.pdf>

5.2 Local Air Quality

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. SCAQMD has also provided *Final Localized Significance Threshold Methodology* (LST Methodology), July 2008, that details the methodology to analyze local air emission impacts. The LST Methodology found that the primary emissions of concern are NO₂, CO, PM₁₀, and PM_{2.5}.

The significance thresholds for the local emissions of NO₂ and CO are determined by subtracting the highest background concentration from the last three years of these pollutants from Table D above, from the most restrictive ambient air quality standards for these pollutants that are outlined in the LSTs. Since PM₁₀ and PM_{2.5} currently exceed the most restrictive ambient air quality standards in the Basin, their thresholds has been directly based on the LSTs and background concentrations of PM₁₀ and PM_{2.5} are not factored into the threshold. Table F below shows the LSTs for NO₂, CO, and PM₁₀ and PM_{2.5} as well as the background concentrations and resultant significance concentrations.

Table G – SCAQMD Local Air Quality Thresholds of Significance for Construction

Pollutant	SCAQMD LSTs¹	Background Level²	Significance Thresholds³
NO₂ - 1-Hour Average (State)	0.18 ppm (338 µg/m ³)	0.0795 ppm (149 µg/m ³)	189 µg/m ³
CO - 1-Hour Average (State)	20 ppm (23,000 µg/m ³)	2.5 ppm (2,875 µg/m ³)	20,125 µg/m ³
CO - 8-Hour Average (State/Federal)	9.0 ppm (10,000 µg/m ³)	1.38 ppm (1,533 µg/m ³)	8,467 µg/m ³
PM₁₀ - 24 Hour Average ⁴	10.4 µg/m ³	--	10.4 µg/m ³
PM_{2.5} - 24-Hour Average ⁴	10.4 µg/m ³	--	10.4 µg/m ³

Notes:

¹ Obtained from: <http://www.aqmd.gov/ceqa/handbook/signthres.pdf>.

² Obtained from Table D above and based on the highest measured concentrations from the last 3 years at the Azusa Station.

³ Represents the maximum offsite concentrations allowed during operations.

⁴ Based on SCAQMD Rule 403(d)(3).

5.3 Toxic Air Contaminants

According to the SCAQMD CEQA Handbook, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in an Acute or Chronic Hazard Index increase of 1 or greater.

In order to determine if the proposed project may have a significant impact related to hazardous air pollutants (HAP), the *Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*, (Diesel Analysis) prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create HAPs through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the HAP and the toxicity of the HAP should be analyzed through a comprehensive facility-wide health risk assessment (HRA).

5.4 Odor Impacts

The SCAQMD CEQA Handbook states that an odor impact would occur if the proposed project creates an odor nuisance pursuant to SCAQMD Rule 402, which states:

“A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.”

If the proposed project results in a violation of Rule 402 with regards to odor impacts, then the proposed project would create a significant odor impact.

5.5 Greenhouse Gases

The proposed project is located within the jurisdiction of the SCAQMD. In order to identify significance criteria under CEQA for development projects, SCAQMD initiated a Working Group, which provided detailed methodology for evaluating significance under CEQA. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual threshold of 3,000 MTCO₂e for all land use types. Although the SCAQMD provided substantial evidence supporting the use of the above threshold, they have not been formally adopted because the SCAQMD is awaiting the outcome of the pending appeal of the California Building Industry Association v. Bay Area Air Quality Management District (BAAQMD), is resolved. Therefore, the proposed project would be considered to create a significant cumulative GHG impact if the proposed project would exceed the annual threshold of 3,000 MTCO₂e.

6.0 IMPACT ANALYSIS

6.1 CEQA Thresholds of Significance

Consistent with CEQA and the State CEQA Guidelines, a significant impact related to air quality and global climate change would occur if the proposed project is determined to result in:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people.
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

6.2 Air Quality Compliance

The proposed project may conflict with or obstruct implementation of the SCAQMD Air Quality Management Plan (AQMP). The following section discusses the proposed project's consistency with the SCAQMD AQMP.

SCAQMD Air Quality Management Plan

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and regional plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD AQMP. Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

- (1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (except as provided for CO in Section 9.4 for relocating CO hot spots).

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-
- (2) Whether the project will exceed the assumptions in the AQMP in 2010 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis contained in this report, short-term regional construction air emissions would not result in significant impacts based on SCAQMD regional thresholds of significance discussed above in Section 5.1. With implementation of Mitigation Measure 1 short-term construction local concentrations of criteria pollutants will not result in significant impacts based on the SCAQMD local thresholds of significance discussed above in Section 5.2. The long-term operation of the proposed project would not result in significant impacts based on SCAQMD thresholds of significance discussed in Section 5.1 above. The ongoing operation of the proposed project would generate air pollutant emissions that are inconsequential on a regional basis. The analysis for long-term local air quality impacts showed that local pollutant concentrations would not be projected to exceed the air quality standards. Therefore, no long-term impact would occur and no mitigation would be required.

Therefore, based on the information provided above the proposed project would be consistent with the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to insure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The *2012-2035 Regional Transportation/Sustainable Communities Strategy* consists of three sections: Core Chapters, Ancillary Chapters, and Bridge Chapters. The Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management chapters constitute the Core Chapters of the document. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this project, the City of Arcadia Land Use Plan defines the assumptions that are represented in the AQMP.

The project site is currently designated as Open Space in the General Plan Land Use Plan. The proposed project is consistent with the current land use designation and would not require a General Plan Amendment or zone change. Therefore, the proposed project would not result in an inconsistency with the current land use designation. Therefore, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Mitigation Measure 1

The project applicant shall require that all contractors used for the removal of vegetation and removal of sediment during both the initial construction and on-going annual maintenance

activities water all exposed areas a minimum of three times per day, throughout the duration of earth moving activities.

Level of Significance After Mitigation

Less than significant impact.

6.3 Air Quality Standard Violation

The proposed project may violate an air quality standard or contribute substantially to an existing or projected air quality violation. The following section calculates the potential air emissions associated with the construction and operations of the proposed project and compares the emissions to the SCAQMD standards.

Construction Emissions

The proposed project would consist of the removal of 94,000 cubic yards of sediment and construction of a pump station and 7,000 foot long pipeline. The construction emissions have been analyzed for both regional and local air quality impacts as well as potential toxic air impacts and odor impacts.

Construction-Related Regional Impacts

The following provides a discussion of the methodology used to calculate regional construction air emissions and an analysis of the proposed project's short-term construction emissions for the criteria pollutants.

Methodology

Typical emission rates from construction activities were obtained from CalEEMod Version 2013.2.2. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2011 computer program to calculate the emission rates specific for Orange County for construction-related employee vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy truck operations. EMFAC2011 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Using CalEEMod, the peak daily air pollutant emissions during each phase was calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions. The construction emissions printouts from CalEEMod are provided in Appendix A.

The phases of construction activities which have been analyzed below are: 1) pipeline construction, 2) paving, 3) dewatering of basin, 4) removal of vegetation, 5) sediment removal; 6) pump station construction. However, it should be noted that the order that the construction phases are completed may change, since some phases cannot be completed during the rainy season.

Pipeline Construction

The pipeline construction was modeled in CalEEMod based on the default trenching phase in the model. The pipeline construction is anticipated to start in summer, 2015 and be completed over a three month period. The pipeline will be constructed in segments in order to limit the length and duration of any lane closures along Clark Street, however in order to provide a worst-case analysis, the pipeline construction was analyzed as occurring in one phase. The pipeline construction activities would require up to eight worker trips per day. The onsite equipment would consist of the simultaneous operation of one concrete saw, one excavator, and one rubber tired loader.

Paving

The repaving of the torn up portions of Clark Street would occur after the completion of the installation of pipeline in Clark Street, which is anticipated to occur in segments to limit the length and duration of any lane closures along Clark Street, however in order to provide a worst-case analysis, the paving was analyzed as occurring in one phase over a one month period and covering one acre of roadway. The paving activities would require up to 10 worker trips per day. The onsite equipment would consist of the simultaneous operation of one cement and mortar mixer, one paver, one roller, and one of either a tractor, loader, or backhoe.

Dewatering of Basin

The dewatering of the basin to approximately 208 feet in elevation, was modeled in CalEEMod based on the default building construction phase in the model and would consist of utilizing up to four diesel pumps to pump the water out of the basin. The dewatering of basin phase was modeled as occurring over one month and is anticipated to start after the completion of the paving phase. The dewatering of the basin is anticipated to require up to ten worker trips per day and take up to four diesel water pumps operating 12 hours per day.

Removal of Vegetation

The removal of vegetation phase was modeled in CalEEMod based on the default site preparation phase in the model and would consist of removing any vegetation, tree stumps, and other debris prior to the sediment removal phase. The removal of vegetation phase was modeled as occurring over two weeks and is anticipated to start after the completion of the dewatering of the basin and outside of bird nesting season. The site preparation activities would require ten worker trips per day. In order to account for the air emissions from water trucks, six vendor truck trips per day were added to the removal of vegetation phase. The onsite equipment would consist of the simultaneous operation of one crawler tractor, one excavator, one rubber tired dozer, and one of either a tractor, loader, or backhoe.

Sediment Removal

The sediment removal phase was modeled in CalEEMod based on the default grading phase in the model. The sediment removal would occur after the completion of the removal of vegetation phase and is anticipated to take 60 working days to complete. The sediment removal phase has been modeled based on the export of 94,000 cubic yards of sediment, that will require 200 truck loads per day carrying 16 cubic yards per truck trip, with each truck trip traveling seven miles to Azusa Land Reclamation, which is the farthest away repository and represents the worst-case scenario. The sediment removal would require a total of 5,875 round trips or 11,750 one way truck trips. The SCAQMD has identified a bug in the fugitive dust calculations in CalEEMod for on-road travel, since the model provides the total PM₁₀ and PM_{2.5} fugitive dust emissions for the duration of hauling in the daily emissions results. To correct for this, SCAQMD recommends that the total emissions for on-road haul fugitive dust (150.78 pounds of PM₁₀ and 15.58 pounds of PM_{2.5}) be divided by the total number of haul days (60 days), which results in 2.51 pounds of PM₁₀ per day and 0.26 pounds of PM_{2.5} per day from offsite hauling fugitive dust.

The sediment removal activities would require up to ten worker trips per day. In order to account for the air emissions from water trucks, six vendor truck trips per day were added to the sediment removal phase. The onsite equipment would consist of the simultaneous operation of one crawler tractor, one excavator, and two rubber tired loaders.

Pump Station Construction

The pump station construction phase was modeled in CalEEMod based on the default building construction phase in the model. The pump station construction would occur after the completion of the

sediment removal phase and is anticipated to take four months to complete. The building construction phase was modeled based on the construction of 400 square feet of industrial building space. The pump station construction would require up to 39 worker trips and 10 vendor trips per day. The onsite equipment would consist of the simultaneous operation of one crane, one forklift, one generator set, one welder, and one of either a tractor, loader, or backhoe.

Project Impacts

The construction-related criteria pollutant emissions for each phase are shown below in Table H. Table H shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from construction of the proposed project.

Table H – Construction-Related Criteria Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
Pipeline Construction						
On-Site ¹	1.64	16.64	9.11	0.02	0.86	0.82
Off-Site ²	0.04	0.06	0.61	0.00	0.09	0.02
Total	1.68	16.70	9.72	0.02	0.95	0.84
Paving						
On-Site	1.76	17.51	10.91	0.02	1.02	0.94
Off-Site	0.10	0.14	1.53	0.00	0.23	0.06
Total	1.86	17.65	12.44	0.02	1.25	1.00
Dewatering of Basin						
On-Site	4.47	31.85	23.38	0.04	2.39	2.39
Off-Site	0.05	0.07	0.76	0.00	0.11	0.03
Total	4.52	31.92	24.14	0.04	2.50	2.42
Removal of Vegetation						
On-Site	2.76	32.37	19.71	0.03	8.11	4.80
Off-Site	0.12	0.68	1.52	0.00	5.70	0.60
Total	2.88	33.05	21.23	0.03	13.81	5.40
Sediment Removal						
On-Site	5.57	63.67	33.28	0.05	9.72	6.28
Off-Site	2.11	20.64	30.77	0.05	8.52	1.13
Total	7.68	84.31	64.05	0.10	18.24	7.41
Pump Station Construction						
On-Site	2.36	18.90	11.76	0.02	1.20	1.14
Off-Site	0.15	0.74	2.04	0.00	0.26	0.08
Total	2.51	19.64	13.80	0.02	1.46	1.22
SCQAMD Thresholds	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Notes:

¹ On-site emissions from equipment not operated on public roads.

² Off-site emissions from vehicles operating on public roads.

Source: CalEEMod Version 2013.2.2.

Construction-Related Local Impacts

Construction-related air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Basin. The proposed project has been analyzed for the potential local air quality impacts created from: construction-related fugitive dust and diesel emissions; from toxic air contaminants; and from construction-related odor impacts.

Local Air Quality Impacts from Construction

The proposed project's construction-related air emissions from fugitive dust and on-site diesel emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Basin.

The local air quality emissions from construction were analyzed through utilizing the methodology described in *Localized Significance Threshold Methodology* (LST Methodology), prepared by SCAQMD, revised July 2008. The LST Methodology found the primary emissions of concern are NO₂, CO, PM₁₀, and PM_{2.5}. In order to determine if any of these pollutants require a detailed analysis of the local air quality impacts, each phase of construction was screened using the SCAQMD's Mass Rate LST Look-up Tables. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily onsite emissions of CO, NO_x, PM₁₀, and PM_{2.5} from the proposed project could result in a significant impact to the local air quality.

The emission thresholds were calculated based on the East San Gabriel Valley source receptor area and a disturbance of two acres, which is the nearest acreage available to the daily disturbed area. The nearest sensitive receptors consist of single-family residential units located on the north side of the basin and as near as 50 feet (15 meters) from where construction equipment would operate. According to the LST Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25 meter threshold. Table I shows the onsite emissions from the CalEEMod model for the different construction phases and the calculated emissions thresholds.

Table I – Local Construction Emissions at the Nearest Receptors Prior to Mitigation

Phase	Pollutant Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Pipeline Construction	16.64	9.11	0.86	0.82
Paving	17.51	10.91	1.02	0.94
Dewatering of Basin	31.85	23.38	2.39	2.39
Removal of Vegetation	32.37	19.71	8.11	4.80
Sediment Removal	63.67	33.28	9.72	6.28
Pump Station Construction	18.90	11.76	1.20	1.14
SCAQMD Threshold for 25 meters (82 feet) or less ¹	128	953	7	5
Exceeds Threshold?	No	No	Yes	Yes

Notes:

¹ The nearest sensitive receptors are single-family homes as near as 50 feet (15 meters) from the on-site construction activities. According to LST methodology any receptor closer than 25 meters should be based on the 25 meter threshold.

Source: Vista Environmental, calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for two acres in East San Gabriel Valley.

The data provided in Table I shows that during the removal of vegetation phase and sediment removal phase, PM₁₀ would exceed the local emissions thresholds at the nearest sensitive receptors and during the sediment removal phase, PM_{2.5} would exceed the local emissions thresholds at the nearest sensitive receptors. This would be considered a significant impact.

Mitigation Measure 1 is provided that would require the removal of vegetation and removal of sediment contractors to water all exposed areas a minimum of three times per day during the duration of earth moving activities. Through implementation of Mitigation Measure 1, the on-site PM₁₀ emissions from the removal of vegetation phase would be reduced to 4.11 pounds per day and the sediment removal phase would be reduced to 5.72 pounds per day, which are within the SCAQMD local threshold for PM₁₀ of 7 pounds per day where sensitive receptors are located 82 feet or nearer to construction activities. Implementation of Mitigation Measure 1 would also reduce the PM_{2.5} emissions during the sediment removal phase to 4.23 pounds per day, which is within the SCAQMD local threshold for PM_{2.5} of 5 pound per day. Therefore, local PM₁₀ and PM_{2.5} concentrations would be reduced to less than significant with implementation of Mitigation Measure 1.

Operational Emissions

The on-going operation of the proposed project would require occasional periodic visits from LACDPW staff, which already occur to the project site and result in air emissions from the vehicle transporting the workers to and from the project site. Although, the duration of the visits may be expanded to include inspection of the new equipment, no change in the number of trips to the project site and resultant change in air emissions would be anticipated to occur from implementation of the proposed project.

The on-going operation of the proposed project would also require the periodic removal of sediment from the Santa Anita Wash outlet. Up to 2,000 cubic yards of accumulated sediment may need to be removed per year. Some vegetation may also require removal, if growth occurs in the maintenance area. It is anticipated that the hauling of sediment during maintenance will follow the same truck haul route, hauling rates and on-site equipment used during the sediment removal phase detailed above in the construction emissions analysis.

The above analysis for the construction emissions found that the regional criteria pollutant emissions generated from the removal of vegetation and sediment removal activities would not exceed the SCAQMD regional thresholds of significance. Therefore, a less than significant regional air quality impact would occur from operation of the proposed project.

The above analysis also for the construction emissions also shows that the local concentrations of criteria pollutants would exceed the PM₁₀ and PM_{2.5} thresholds during the removal of vegetation activities. This would be considered a significant operation-related local air quality impact.

Mitigation Measure 1 is provided that would require the removal of vegetation and removal of sediment contractors used for the annual maintenance operations to water all exposed areas a minimum of three times per day during the duration of earth moving activities. The above analysis for the construction emissions found that implementation of Mitigation Measure 1, would reduce the PM₁₀ emissions from the removal of vegetation to 4.11 pounds per day, which is within the SCAQMD local threshold for PM₁₀ of 7 pounds per day where sensitive receptors are located 82 feet or nearer to construction activities. Implementation of Mitigation Measure 1 would also reduce the PM_{2.5} emissions during the sediment removal phase to 4.23 pounds per day, which is within the SCAQMD local threshold for PM_{2.5} of 5 pound per day. Therefore, local operational PM₁₀ and PM_{2.5} concentrations would be reduced to less than significant with implementation of Mitigation Measure 1.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Mitigation Measure 1, provided in Section 6.2.

Level of Significance After Mitigation

Less than significant impact.

6.4 Net Increase in Non-Attainment Pollution

The proposed project may result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel throughout the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the project's air quality must be generic by nature. The project area is out of attainment for both ozone and PM₁₀ and PM_{2.5} particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the Basin.

Construction-Related Cumulative Impacts

The project site is located in the Basin, which is currently designated by the EPA as a non-attainment area for ozone, PM₁₀, and PM_{2.5}. The ozone, PM₁₀, and PM_{2.5} emissions associated with the proposed project have been calculated above in Section 6.3. The above analysis found that implementation of the proposed project would result in locally significant emissions of PM₁₀ and PM_{2.5} during construction of the proposed project. Mitigation Measure 1 have been provided to reduce the construction-related PM₁₀ and PM_{2.5} to less than significant levels. Therefore, with implementation of Mitigation Measure 1, a less than significant cumulative impact would occur from construction of the proposed project.

Operational-Related Cumulative Impacts

The greatest cumulative operational impact on the quality of regional basin will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development. In accordance with SCAQMD methodology, projects that do not exceed SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. The data provided in Section 6.3 above shows that for the on-going operations activities for the proposed project, the criteria pollutants would not exceed the SCAQMD regional thresholds of significance discussed above in Section 5.1. The above analysis found that implementation of the proposed project would result in locally significant emissions of PM₁₀ and PM_{2.5} during annual maintenance activities for the proposed project. Mitigation Measure 1 has been provided to reduce the operation-related PM₁₀ and PM_{2.5} to less than significant levels. Therefore, with implementation of Mitigation Measure 1, a less than significant cumulative impact would occur from operation of the proposed project.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Mitigation Measure 1 provided in Section 6.2.

Level of Significance After Mitigation

Less than significant impact.

6.5 Sensitive Receptors

The proposed project may expose sensitive receptors to substantial pollutant concentrations. The following section analyzes the potential impacts to the nearby sensitive receptors from local CO emission impacts and from the health risks associated with diesel emissions.

Local CO Emissions Impacts

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented in Section 5.0 above.

To determine if the proposed project could cause emission levels in excess of the CO standards discussed above in Section 5.0, a sensitivity analysis is typically conducted to determine the potential for CO “hot spots” at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, “hot spots” typically occur at intersections with a Level of Service E or worse.

The proposed project is anticipated to generate up to 200 truck trips per day during the removal of sediment phase of the proposed project. The truck trips are anticipated to occur relatively evenly between 7:00 a.m. and 7:00 p.m., which will result in relatively few trips generated during the peak travel hours on the nearby roadways, when CO hotspots have the potential to occur. Therefore, the project contribution to the local CO levels is anticipated to be nominal and no long-term significant CO impacts are anticipated.

Toxic Air Contaminants Impacts

The proposed project would generate toxic air contaminant emissions from diesel truck emissions and on-site diesel equipment used during both the sediment removal activities and the annual maintenance activities for of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. “Individual Cancer Risk” is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology.

The cancer risks have been calculated for the sediment removal activities for both the removal of the initial 94,000 cubic yards of material that is anticipated to occur over 30 workdays and the annual maintenance sediment removal, which is anticipated to be as high as 2,000 cubic yards of material a year and could be removed in one day.

Dispersion Modeling

Important issues that affect the dispersion modeling include the following: 1) Model Selection, 2) Source Treatment, 3) Meteorological Data, and 4) Receptor Grid. Each of these issues is addressed below.

Model Selection

The AERMOD View Version 8.7.0 Model was used for all dispersion modeling. Key dispersion modeling options selected include the regulatory default option and urban modeling option based on a population of 9,862,049 for Los Angeles County. Flagpole receptor height was set to 0 meters. AERMAP was run with a 7.5 minute USGS DEM Map of El Monte. These modeling options were selected to be consistent with guidance from SCAQMD.

Source Treatment

The sediment removal and operational maintenance activities would generate 200 haul trucks round trips per day and would require the on-site operation of one crawler tractor, one excavator, and one rubber tired dozer. The sediment removal activities were based on operating 30 days in the month of August and the operational maintenance activities were based on operating one day per year.

Diesel Truck Travel

The diesel truck travel has been limited to the first quarter mile of the two alternative routes that the haul trucks are anticipated to take to any of the depository sites. In order to provide a worst-case analysis, the two alternative routes have been analyzed in the same model run. The study area has been limited to a quarter mile based on dispersion parameters of toxic air pollutants. The on-site access road from Peck Road to the staging area was modeled as well as the off-site roads of Peck Road north of the project driveway and Peck Road south of the project driveway. Each truck was modeled based on the truck traveling the length of the roadway. Each roadway was modeled as a line volume source with a release height of 13.6 feet, plume height of 6.3 feet and plume width of 9.3 feet for the on-site roads and 15 feet for the off-site roads.

The emission factors used for the roadway line sources was based on model run of the web based version of EMFAC2011 for Los Angeles County. Emissions factors were based on the year 2015 traveling at 10 miles per hour on-site and 35 miles per hour off-site. In order to provide a worst-case analysis all trucks were based on the Heavy-Heavy Duty Trucks (T7) category in the EMFAC2011 model, which found emission factors of: 0.213 grams per mile for the on-site roads and 0.090 grams per mile for the off-site roads. The line source emission rates were calculated by finding the emissions created by one truck, then multiplying it by the percentage of time the trucks will be running through that line source per day. This results in emission rates of 9.251E-04 grams per second for the on-site roads, 1.099E-04 grams per second for Peck Road north of the project site, and 1.562E-04 grams per second for Peck Road south of the project site, which was used in AERMOD for the road volume line sources.

On-Site Construction Equipment

The diesel PM₁₀ emissions from the on-site construction equipment has been previously calculated above in Section 6.3, which found that during the sediment removal phase, the off-road equipment would generate PM₁₀ emissions of 3.17 pounds per day during the sediment removal activities. The on-site construction equipment emissions were analyzed as an area source based on covering the entire area to be disturbed. This resulted in a PM₁₀ emission rate of 3.332E-07 grams per second.

Meteorological Data

Meteorological data from the Air District's Azusa Monitoring Station was selected for this modeling application. Five full years of sequential meteorological data was collected at the Azusa Station from 2005 to 2009 by the SCAQMD, which was the closest station with meteorological data to the project. The SCAQMD processed the data for input to the model. The data was obtained at SCAQMD's <http://www.aqmd.gov/smog/metdata/AERMOD.html>.

Receptor Grid

Discrete receptors were placed at the locations of the nearest off-site residential and industrial structures and grid receptors were used out to 500 meters (1,640 feet).

Estimation of Health Risks

Health risks from diesel particulate matter are twofold. First, diesel particulate matter is a carcinogen according to the State of California. Second, long-term chronic exposure to diesel particulate matter can cause health effects to the respiratory system. Each of these health risks is discussed below.

Cancer Risks

According to the in Health Risk Assessment for Proposed Land Use Projects, prepared by CAPCOA, July 2009, the cancer risk should be calculated using the following formula:

$$[\text{Dose-inh (mg/(Kg-day))}] * [\text{Oral Slope Factor (kg-day)/mg}] * [1 \times 10^6] = \text{Potential Cancer Risk}$$

Where:

Oral Slope Factor = 1.1

$$\text{Dose-inh} = (C_{\text{air}} * \text{DBR} * A * \text{EF} * \text{ED} * 10^6) / \text{AT}$$

Where:

C_{air} [Concentration in air ($\mu\text{g}/\text{m}^3$)] = (Calculated by AERMOD Model)

DBR [Daily breathing rate (L/kg body weight – day)] = 302 for residential and 149 for off-site worker and 50 for park uses.

A [Inhalation absorption factor] = 1

EF [Exposure frequency (days/year)] = 350 for residential and 245 for off-site worker

ED [Exposure duration (years)] = 70 for residential and 40 for offsite worker and park

10^6 [Micrograms to milligrams conversion]

AT [Average time period over which exposure is averaged in days] = 25,550

According to the OEHHA formula the residential receptors equates to $C_{\text{air}} * 318.5 = \text{Potential Cancer Risk}$, the offsite worker area receptors equates to $C_{\text{air}} * 62.9 = \text{Potential Cancer Risk}$, and the park receptors equates to $C_{\text{air}} * 21.2 = \text{Potential Cancer Risk}$.

The AERMOD model was run for both the annual emissions and worst-case daily emissions. The worst-case daily emissions were averaged over 365 days in order to calculate the annual operational emissions, since the operational emissions would be limited to one day per year of sediment removal. The diesel particulate cancer risk created from the operation of the on-site diesel equipment and haul routes are shown below on Figure 3 and Appendix B. Table J provides a summary of the calculated diesel emission concentrations at the nearest sensitive receptors, including the point of maximum impact (PMI).

Table J – Diesel PM₁₀ Levels and Cancer Risks

Sensitive Receptor	Receptor Type	Receptor Location ¹ (meters)		Annual Concentration ($\mu\text{g}/\text{m}^3$)		Cancer Risk Per Million People ²
		X	Y	Sediment Removal	Annual Maintenance	
1	Residential	406,368	3,774,208	0.0216	0.003	1.4
2	Residential	406,610	3,774,353	0.0206	0.0013	0.9
3	Off-Site Worker	406,920	3,774,202	0.0255	0.0013	0.2
4	Off-Site Worker	406,754	3,773,799	0.0145	0.0014	0.1
PMI ³	Park	406,429	3,773,862	0.1614	0.0073	0.4
Threshold of Significance						10

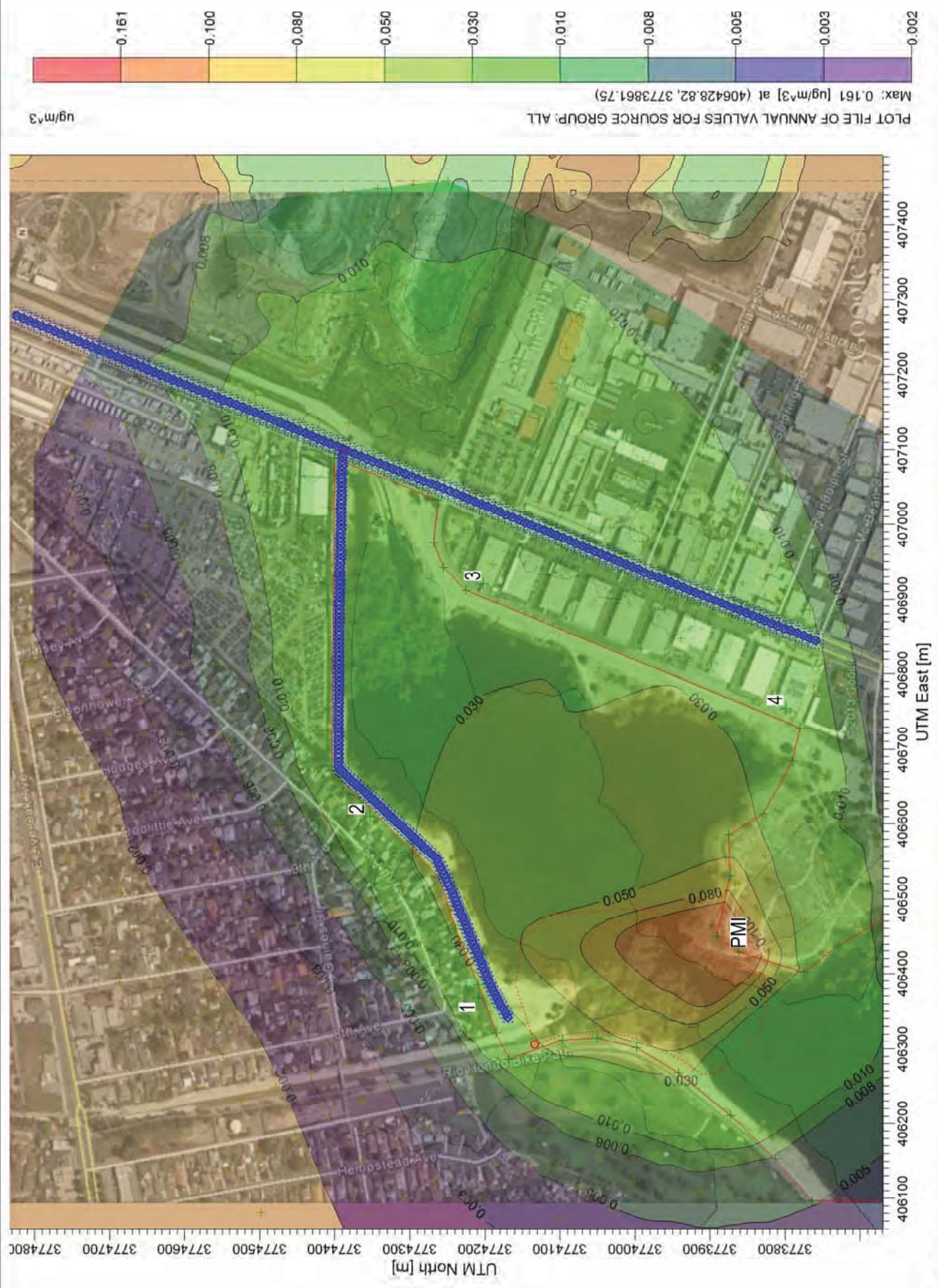
Notes:

¹ Receptor location based on World Geodetic System 1984 (WGS84), Universal Transverse Mercator (UTM).

² Cancer risk based on a residential receptor cancer risk = $318.5 \times C_{\text{air}}$; off-site worker cancer risk = $62.9 \times C_{\text{air}}$; or park cancer risk = $21.2 \times C_{\text{air}}$.

³ Point of Maximum Impact.

Source: Calculated from ISC-AERMOD View Version 8.7.0.



SOURCE: AERMOD View Version 8.2.0 and Google Earth.



VISTA ENVIRONMENTAL

Figure 3
Diesel Particulate Emissions Levels and Cancer Risks at Nearby Receptors

Table J shows that the point of maximum impact (PMI) of off-site PM₁₀ emissions would occur on the northwest corner of Peck Road Park, with concentration levels of 0.1614 µg per m³ from the sediment removal and 0.0073 µg per m³ from the annual maintenance activities. The cancer risk has been calculated at the PMI was found to result in a cancer risk increase of 0.4 per million people. Sensitive Receptor 1, represents the nearest residence at the corner of Lynd Avenue and 8th Avenue to the project site that would experience the highest level of project-related diesel emissions and would result in a cancer risk increase of 1.4 per million people. All off-site diesel emissions concentrations were found to be below the 10.0 in a million cancer risk threshold that has been discussed above in Section 5.3. Therefore, no significant long-term health impacts would occur from the operation of diesel trucks and equipment on the project site.

In order to provide a perspective of risk, it is often estimated that the incidence in cancer over a lifetime for the U.S. population ranges between 1 in 3 to 4 and 1 in 3, or a risk of about 300,000 per million persons. The MATES-III study referenced a Harvard Report on Cancer Prevention, which estimated that of cancers associated with known risk factors, about 30 percent were related to tobacco, about 30 percent were related to diet and obesity, and about 2 percent were associated with environmental pollution related exposures that includes hazardous air pollutants.

Non-Cancer Risks

The relationship for acute or chronic non-cancer health effects is given by the equation:

$$HI_{DPM} = C_{DPM}/REL_{DPM}$$

Where,

HI_{DPM} = Hazard Index; an expression of the potential for non-cancer health effects.

C_{DPM} = Annual average diesel particulate matter concentration in µg/m³.

REL_{DPM}= Reference Exposure Level (REL) for diesel particulate matter; the diesel particulate matter concentration at which no adverse health effects are anticipated.

The REL_{DPM} is 5 µg/m³. The Office of Environmental Health Hazard Assessment has established this concentration, which found that a project with a hazard index greater than one could result in adverse health effects of various sorts. The resulting maximum annual average diesel particulate matter concentrations (C_{DPM}) for each receptor analyzed is shown above in Table J, which found the highest concentration of 0.1614 µg per m³ would occur at Peck Road Park during the sediment removal activities. The resulting Hazard Index is:

$$HI_{DPM} = 0.1614/5 = 0.0323$$

The criterion for significance is a Hazard Index increase of 1.0 or greater. Therefore, the proposed project would result in a less than significant impact due to the non-cancer risk from diesel emissions created by the proposed project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

6.6 Objectionable Odors

The proposed project would not create objectionable odors affecting a substantial number of people. Individual responses to odors are highly variable and can result in a variety of effects. Generally, the impact of an odor results from a variety of factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity in which he or she is engaged; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the people that live and work in the immediate vicinity of the project site and is typically presented as the mean (or 50 percent of the population). The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality, this is typically represented by recognition by 50 percent of the population. The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies in subjective experience, frequency, odor character, odor intensity, and duration.

Potential sources that may emit odors from implementation of the proposed project would include emissions from diesel equipment, and odors created from the moving of decomposing organic material as well as the potential of fish odors, when the basin is drained. The objectionable odors that may be produced during the project activities would be temporary and would not likely be noticeable for extended periods of time beyond the project site's boundaries. Odor emission during the project activities would be short-term in nature and primarily limited to the operational time of the diesel equipment, which would result in transitory odor impacts at the nearby residences that would not be anticipated to impact 50 percent of the nearby population at any time. Therefore, a less than significant odor impact would occur and no mitigation would be required.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

6.7 Generation of Greenhouse Gas Emissions

The proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The proposed project would consist of the removal of 94,000 cubic yards of sediment and construction of a pump station and 7,000 foot long pipeline. The on-going operation of the proposed project would also require the annual removal of up to 2,000 cubic yards of sediment and vegetation from the Santa Anita Wash outlet.

The CalEEMod Version 2013.2.2 was used to calculate the GHG emissions from the proposed project. In order to provide a worst-case analysis, the GHG emissions were calculated for

Project Greenhouse Gas Emissions

The project's GHG emissions have been calculated with CalEEMod model based on the parameters detailed above. A summary of the results for the worst-case initial year of activities are shown below in Table K and CalEEMod model run for the proposed project is provided in Appendix C.

Table K – Project Related Greenhouse Gas Annual Emissions

	Greenhouse Gas Emissions (Metric Tons per Year)					
	Bio-CO ₂	NonBio-CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
Project Emissions	0.00	476.19	476.19	0.09	0.00	477.98
SCAQMD Draft Threshold of Significance						3,000

Source: CalEEMod Version 2013.2.2.

The data provided in Table K above shows that the proposed project would create 477.98 MTCO₂e for the worst-case initial construction year. According to the SCAQMD draft threshold of significance detailed above in Section 5.5, a cumulative global climate change impact would occur if the GHG emissions created from the on-going operations would exceed 3,000 MTCO₂e per year. Therefore, a less than significant generation of greenhouse gas emissions would occur from development and operation of the proposed project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

6.8 Greenhouse Gas Plan Consistency

The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions. Neither the County nor any of the local jurisdictions has a Climate Action Plan or Greenhouse Gas Reduction Plan. Instead, the County and local jurisdictions rely on the expertise of the SCAQMD and utilizes the SCAQMD as guidance for the environmental review of plans and development proposals within its jurisdiction. Therefore, the SCAQMD's GHG emission threshold is applicable to the proposed project.

In order to identify significance criteria under CEQA for development projects, SCAQMD initiated a Working Group, which provided detailed methodology for evaluating significance under CEQA. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual threshold of 3,000 MTCO₂e for all land use projects. Although the SCAQMD provided substantial evidence supporting the use of the above threshold, they have not been formally adopted because the SCAQMD is awaiting the outcome of the pending appeal of the California Building Industry Association v. Bay Area Air Quality Management District (BAAQMD), is resolved.

According to the project GHG emissions calculations above, implementation of the proposed project would result in the generation of 477.98 MTCO₂e for the worst-case initial year of activities. The proposed project would be below the SCAQMD's proposed threshold of 3,000 MTCO₂e. Therefore, the proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

7.0 REFERENCES

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APPENDIX A

CalEEMod Model Daily Printouts

Peck Road Spreading Basin

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.40	User Defined Unit	2.00	400.00	0
Other Asphalt Surfaces	1.00	Acre	1.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2016

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	630.89	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 400 square feet of User Defined Industrial on 2 acres and 1 acre of Other Asphalt Surfaces

Construction Phase - Project schedule provided by applicant

Off-road Equipment - dewatering - four 84-hp pumps operating 12-hours per day.

Off-road Equipment - Paving - 1 cement mixer, 1 paver, 1 roller, 1 loader

Off-road Equipment - Pipeline Construction - 1 concrete saw, 1 excavator, 1 rubber tired loader

Off-road Equipment - Pump station construction - 1 crane, 1 forklift, 1 tractor/loader/backhoe, 1 generator set, and 1 welder

Off-road Equipment - Removal of vegetation - 1 Rubber tired dozer, 1 excavator, 1 crawler tractor, and 1 backhoe

Off-road Equipment - Sediment Removal - 1 excavator, 2 rubber tired loaders, and 1 crawler tractor

Trips and VMT - 6 vendor trips added to the removal of vegetation phase and sediment removal phase to account for the water truck emissions. Haul truck trip length set to 7 miles.

On-road Fugitive Dust - Percent Pavement for Removal of Vegetation and Sediment Removal set to 98% to account for the on-site dirt roads

Grading - 94,000 cubic yards of material exported

Construction Off-road Equipment Mitigation - Mitigation - Water exposed areas 3 times per day

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	2100	65940
tblConstructionPhase	NumDays	220.00	89.00
tblConstructionPhase	NumDays	6.00	60.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	3.00	10.00
tblConstructionPhase	PhaseEndDate	10/30/2015	10/31/2015
tblGrading	AcresOfGrading	60.00	30.00
tblGrading	MaterialExported	0.00	94,000.00
tblLandUse	LandUseSquareFeet	0.00	400.00
tblLandUse	LandUseSquareFeet	43,560.00	1,000.00
tblLandUse	LotAcreage	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	98.00

tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	Hauling TripLength	20.00	7.00
tblTripsAndVMT	Vendor TripNumber	0.00	6.00
tblTripsAndVMT	Vendor TripNumber	0.00	6.00
tblTripsAndVMT	Vendor TripNumber	0.00	7.00
tblTripsAndVMT	Worker TripNumber	15.00	20.00
tblTripsAndVMT	Worker TripNumber	23.00	10.00
tblTripsAndVMT	Worker TripNumber	1.00	18.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day															
2015	7.4776	83.7268	58.9945	0.0951	163.0262	3.4675	166.4937	19.5381	3.1899	22.7281	0.0000	9,796.672	9,796.6729	1.6069	0.0000	9,830.4180
2016	7.0301	78.7369	56.2720	0.0950	54.1163	3.2463	57.3626	8.3295	2.9865	11.3160	0.0000	9,685.714	9,685.7146	1.6015	0.0000	9,719.3456
Total	14.5076	162.4637	115.2665	0.1900	217.1425	6.7138	223.8563	27.8676	6.1765	34.0441	0.0000	19,482.38	19,482.387	3.2084	0.0000	19,549.7635

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day															
2015	7.4776	83.7268	58.9945	0.0951	159.0293	3.4675	162.4968	17.4840	3.1899	20.6739	0.0000	9,796.672	9,796.6729	1.6069	0.0000	9,830.4180
2016	7.0301	78.7369	56.2720	0.0950	50.1194	3.2463	53.3657	6.2753	2.9865	9.2619	0.0000	9,685.714	9,685.7146	1.6015	0.0000	9,719.3456
Total	14.5076	162.4637	115.2665	0.1900	209.1486	6.7138	215.8625	23.7593	6.1765	29.9358	0.0000	19,482.38	19,482.387	3.2084	0.0000	19,549.7635

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	3.68	0.00	3.57	14.74	0.00	12.07	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pipeline Construction	Trenching	7/1/2015	9/30/2015	5	66	
2	Paving	Paving	10/1/2015	10/31/2015	5	22	
3	Dewatering of Basin	Trenching	11/1/2015	11/30/2015	5	21	
4	Removal of Vegetation	Site Preparation	12/1/2015	12/14/2015	5	10	
5	Sediment Removal	Grading	12/15/2015	3/7/2016	5	60	
6	Pump Station Construction	Building Construction	3/8/2016	7/8/2016	5	89	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Construction	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Construction	Excavators	1	8.00	162	0.38
Pipeline Construction	Rubber Tired Loaders	1	8.00	199	0.36
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Dewatering of Basin	Pumps	4	12.00	84	0.74

Removal of Vegetation	Crawler Tractors	1	8.00	208	0.43
Removal of Vegetation	Excavators	1	8.00	162	0.38
Removal of Vegetation	Rubber Tired Dozers	1	8.00	255	0.40
Removal of Vegetation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sediment Removal	Crawler Tractors	1	8.00	208	0.43
Sediment Removal	Excavators	1	8.00	162	0.38
Sediment Removal	Rubber Tired Loaders	2	8.00	199	0.36
Pump Station Construction	Cranes	1	7.00	226	0.29
Pump Station Construction	Forklifts	1	8.00	89	0.20
Pump Station Construction	Generator Sets	1	8.00	84	0.74
Pump Station Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Pump Station Construction	Welders	1	8.00	46	0.45
Sediment Removal	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Sediment Removal	Rubber Tired Dozers	1	8.00	255	0.40
Sediment Removal	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pipeline Construction	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering of Basin	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Removal of Vegetation	4	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Sediment Removal	9	10.00	6.00	9,294.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Pump Station Construction	5	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Pipeline Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	1.6413	16.6433	9.1124	0.0177		0.8597	0.8597		0.8220	0.8220		1,791.2388	1,791.2388	0.4214		1,800.0890
Total	1.6413	16.6433	9.1124	0.0177		0.8597	0.8597		0.8220	0.8220		1,791.2388	1,791.2388	0.4214		1,800.0890

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0395	0.0496	0.6117	1.1600e-003	0.0894	8.9000e-004	0.0903	0.0237	8.2000e-004	0.0245		101.7137	101.7137	5.8000e-003		101.8356
Total	0.0395	0.0496	0.6117	1.1600e-003	0.0894	8.9000e-004	0.0903	0.0237	8.2000e-004	0.0245		101.7137	101.7137	5.8000e-003		101.8356

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	1.6413	16.6433	9.1124	0.0177		0.8597	0.8597		0.8220	0.8220	0.0000	1,791.2388	1,791.2388	0.4214		1,800.0890
Total	1.6413	16.6433	9.1124	0.0177		0.8597	0.8597		0.8220	0.8220	0.0000	1,791.2388	1,791.2388	0.4214		1,800.0890

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0395	0.0496	0.6117	1.1600e-003	0.0894	8.9000e-004	0.0903	0.0237	8.2000e-004	0.0245		101.7137	101.7137	5.8000e-003		101.8356
Total	0.0395	0.0496	0.6117	1.1600e-003	0.0894	8.9000e-004	0.0903	0.0237	8.2000e-004	0.0245		101.7137	101.7137	5.8000e-003		101.8356

3.3 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	1.6411	17.5066	10.9164	0.0161		1.0248	1.0248		0.9437	0.9437		1,676.9294	1,676.9294	0.4933		1,687.2878
Paving	0.1191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7602	17.5066	10.9164	0.0161		1.0248	1.0248		0.9437	0.9437		1,676.9294	1,676.9294	0.4933		1,687.2878

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0986	0.1240	1.5292	2.9100e-003	0.2236	2.2300e-003	0.2258	0.0593	2.0500e-003	0.0613		254.2843	254.2843	0.0145		254.5891
Total	0.0986	0.1240	1.5292	2.9100e-003	0.2236	2.2300e-003	0.2258	0.0593	2.0500e-003	0.0613		254.2843	254.2843	0.0145		254.5891

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	1.6411	17.5066	10.9164	0.0161		1.0248	1.0248		0.9437	0.9437	0.0000	1,676.9294	1,676.9294	0.4933		1,687.2878
Paving	0.1191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7602	17.5066	10.9164	0.0161		1.0248	1.0248		0.9437	0.9437	0.0000	1,676.9294	1,676.9294	0.4933		1,687.2878

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0986	0.1240	1.5292	2.9100e-003	0.2236	2.2300e-003	0.2258	0.0593	2.0500e-003	0.0613		254.2843	254.2843	0.0145		254.5891
Total	0.0986	0.1240	1.5292	2.9100e-003	0.2236	2.2300e-003	0.2258	0.0593	2.0500e-003	0.0613		254.2843	254.2843	0.0145		254.5891

3.4 Dewatering of Basin - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	4.4664	31.8501	23.3778	0.0395		2.3944	2.3944		2.3944	2.3944		3,738.2140	3,738.2140	0.4013		3,746.6403
Total	4.4664	31.8501	23.3778	0.0395		2.3944	2.3944		2.3944	2.3944		3,738.2140	3,738.2140	0.4013		3,746.6403

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0493	0.0620	0.7646	1.4500e-003	0.1118	1.1200e-003	0.1129	0.0296	1.0200e-003	0.0307		127.1422	127.1422	7.2600e-003		127.2945
Total	0.0493	0.0620	0.7646	1.4500e-003	0.1118	1.1200e-003	0.1129	0.0296	1.0200e-003	0.0307		127.1422	127.1422	7.2600e-003		127.2945

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	4.4664	31.8501	23.3778	0.0395		2.3944	2.3944		2.3944	2.3944	0.0000	3,738.2140	3,738.2140	0.4013		3,746.6403
Total	4.4664	31.8501	23.3778	0.0395		2.3944	2.3944		2.3944	2.3944	0.0000	3,738.2140	3,738.2140	0.4013		3,746.6403

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0493	0.0620	0.7646	1.4500e-003	0.1118	1.1200e-003	0.1129	0.0296	1.0200e-003	0.0307		127.1422	127.1422	7.2600e-003		127.2945
Total	0.0493	0.0620	0.7646	1.4500e-003	0.1118	1.1200e-003	0.1129	0.0296	1.0200e-003	0.0307		127.1422	127.1422	7.2600e-003		127.2945

3.5 Removal of Vegetation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7616	32.3745	19.7057	0.0250		1.5537	1.5537		1.4294	1.4294		2,626.0447	2,626.0447	0.7840		2,642.5083
Total	2.7616	32.3745	19.7057	0.0250	6.5523	1.5537	8.1060	3.3675	1.4294	4.7969		2,626.0447	2,626.0447	0.7840		2,642.5083

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0575	0.5933	0.6662	1.3200e-003	1.2555	9.9400e-003	1.2654	0.1321	9.1400e-003	0.1412		133.5713	133.5713	1.0700e-003		133.5938
Worker	0.0493	0.0620	0.7646	1.4500e-003	4.4369	1.1200e-003	4.4380	0.4609	1.0200e-003	0.4619		127.1422	127.1422	7.2600e-003		127.2945
Total	0.1068	0.6553	1.4308	2.7700e-003	5.6924	0.0111	5.7035	0.5930	0.0102	0.6032		260.7134	260.7134	8.3300e-003		260.8883

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.7616	32.3745	19.7057	0.0250		1.5537	1.5537		1.4294	1.4294		2,626.0447	2,626.0447	0.7840		2,642.5083
Total	2.7616	32.3745	19.7057	0.0250	2.5554	1.5537	4.1091	1.3133	1.4294	2.7427	0.0000	2,626.0447	2,626.0447	0.7840		2,642.5083

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0575	0.5933	0.6662	1.3200e-003	1.2555	9.9400e-003	1.2654	0.1321	9.1400e-003	0.1412		133.5713	133.5713	1.0700e-003		133.5938
Worker	0.0493	0.0620	0.7646	1.4500e-003	4.4369	1.1200e-003	4.4380	0.4609	1.0200e-003	0.4619		127.1422	127.1422	7.2600e-003		127.2945
Total	0.1068	0.6553	1.4308	2.7700e-003	5.6924	0.0111	5.7035	0.5930	0.0102	0.6032		260.7134	260.7134	8.3300e-003		260.8883

3.6 Sediment Removal - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	5.5690	63.6749	33.2772	0.0497		3.1653	3.1653		2.9120	2.9120		5,224.1225	5,224.1225	1.5596		5,256.8745
Total	5.5690	63.6749	33.2772	0.0497	6.5523	3.1653	9.7176	3.3675	2.9120	6.2795		5,224.1225	5,224.1225	1.5596		5,256.8745

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	1.8018	19.3967	24.2866	0.0426	150.7815	0.2912	151.0727	15.5776	0.2677	15.8454		4,311.8369	4,311.8369	0.0390		4,312.6551
Vendor	0.0575	0.5933	0.6662	1.3200e-003	1.2555	9.9400e-003	1.2654	0.1321	9.1400e-003	0.1412		133.5713	133.5713	1.0700e-003		133.5938
Worker	0.0493	0.0620	0.7646	1.4500e-003	4.4369	1.1200e-003	4.4380	0.4609	1.0200e-003	0.4619		127.1422	127.1422	7.2600e-003		127.2945
Total	1.9085	20.0520	25.7173	0.0453	156.4739	0.3023	156.7761	16.1707	0.2779	16.4486		4,572.5503	4,572.5503	0.0473		4,573.5434

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	5.5690	63.6749	33.2772	0.0497		3.1653	3.1653		2.9120	2.9120	0.0000	5,224.1225	5,224.1225	1.5596		5,256.8745
Total	5.5690	63.6749	33.2772	0.0497	2.5554	3.1653	5.7207	1.3133	2.9120	4.2254	0.0000	5,224.1225	5,224.1225	1.5596		5,256.8745

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	1.8018	19.3967	24.2866	0.0426	150.7815	0.2912	151.0727	15.5776	0.2677	15.8454		4,311.8369	4,311.8369	0.0390		4,312.6551
Vendor	0.0575	0.5933	0.6662	1.3200e-003	1.2555	9.9400e-003	1.2654	0.1321	9.1400e-003	0.1412		133.5713	133.5713	1.0700e-003		133.5938
Worker	0.0493	0.0620	0.7646	1.4500e-003	4.4369	1.1200e-003	4.4380	0.4609	1.0200e-003	0.4619		127.1422	127.1422	7.2600e-003		127.2945
Total	1.9085	20.0520	25.7173	0.0453	156.4739	0.3023	156.7761	16.1707	0.2779	16.4486		4,572.5503	4,572.5503	0.0473		4,573.5434

3.6 Sediment Removal - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	5.3685	60.9122	32.5923	0.0497		3.0071	3.0071		2.7665	2.7665		5,166.8645	5,166.8645	1.5585		5,199.5932
Total	5.3685	60.9122	32.5923	0.0497	6.5523	3.0071	9.5594	3.3675	2.7665	6.1340		5,166.8645	5,166.8645	1.5585		5,199.5932

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	1.5664	17.2436	22.3760	0.0425	41.8715	0.2300	42.1015	4.3690	0.2115	4.5805		4,263.8156	4,263.8156	0.0353		4,264.5570
Vendor	0.0506	0.5251	0.6100	1.3200e-003	1.2555	8.2100e-003	1.2637	0.1321	7.5500e-003	0.1397		132.1324	132.1324	9.7000e-004		132.1527
Worker	0.0445	0.0561	0.6937	1.4500e-003	4.4369	1.0600e-003	4.4380	0.4609	9.7000e-004	0.4619		122.9021	122.9021	6.6900e-003		123.0426
Total	1.6615	17.8247	23.6797	0.0453	47.5639	0.2392	47.8032	4.9620	0.2200	5.1820		4,518.8501	4,518.8501	0.0430		4,519.7524

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	5.3685	60.9122	32.5923	0.0497		3.0071	3.0071		2.7665	2.7665	0.0000	5,166.8645	5,166.8645	1.5585		5,199.5932
Total	5.3685	60.9122	32.5923	0.0497	2.5554	3.0071	5.5625	1.3133	2.7665	4.0798	0.0000	5,166.8645	5,166.8645	1.5585		5,199.5932

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	1.5664	17.2436	22.3760	0.0425	41.8715	0.2300	42.1015	4.3690	0.2115	4.5805		4,263.8156	4,263.8156	0.0353		4,264.5570
Vendor	0.0506	0.5251	0.6100	1.3200e-003	1.2555	8.2100e-003	1.2637	0.1321	7.5500e-003	0.1397		132.1324	132.1324	9.7000e-004		132.1527
Worker	0.0445	0.0561	0.6937	1.4500e-003	4.4369	1.0600e-003	4.4360	0.4609	9.7000e-004	0.4619		122.9021	122.9021	6.6900e-003		123.0426
Total	1.6615	17.8247	23.6797	0.0453	47.5639	0.2392	47.8032	4.9620	0.2200	5.1820		4,518.8501	4,518.8501	0.0430		4,519.7524

3.7 Pump Station Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	2.3563	18.9034	11.7585	0.0183		1.2021	1.2021		1.1444	1.1444		1,785.4073	1,785.4073	0.3954		1,793.7111
Total	2.3563	18.9034	11.7585	0.0183		1.2021	1.2021		1.1444	1.1444		1,785.4073	1,785.4073	0.3954		1,793.7111

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0590	0.6126	0.7117	1.5400e-003	0.0437	9.5800e-003	0.0532	0.0124	8.8100e-003	0.0212		154.1544	154.1544	1.1300e-003		154.1782
Worker	0.0802	0.1009	1.2487	2.6200e-003	0.2012	1.9000e-003	0.2031	0.0534	1.7500e-003	0.0551		221.2238	221.2238	0.0120		221.4767
Total	0.1392	0.7135	1.9603	4.1600e-003	0.2449	0.0115	0.2563	0.0658	0.0106	0.0763		375.3783	375.3783	0.0132		375.6549

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	2.3563	18.9034	11.7585	0.0183		1.2021	1.2021		1.1444	1.1444	0.0000	1,785.4073	1,785.4073	0.3954		1,793.7111
Total	2.3563	18.9034	11.7585	0.0183		1.2021	1.2021		1.1444	1.1444	0.0000	1,785.4073	1,785.4073	0.3954		1,793.7111

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0590	0.6126	0.7117	1.5400e-003	0.0437	9.5800e-003	0.0532	0.0124	8.8100e-003	0.0212		154.1544	154.1544	1.1300e-003		154.1782
Worker	0.0802	0.1009	1.2487	2.6200e-003	0.2012	1.9000e-003	0.2031	0.0534	1.7500e-003	0.0551		221.2238	221.2238	0.0120		221.4767
Total	0.1392	0.7135	1.9603	4.1600e-003	0.2449	0.0115	0.2563	0.0658	0.0106	0.0763		375.3783	375.3783	0.0132		375.6549

Peck Road Spreading Basin
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.40	User Defined Unit	2.00	400.00	0
Other Asphalt Surfaces	1.00	Acre	1.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2016

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	630.89	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 400 square feet of User Defined Industrial on 2 acres and 1 acre of Other Asphalt Surfaces

Construction Phase - Project schedule provided by applicant

Off-road Equipment - dewatering - four 84-hp pumps operating 12-hours per day.

Off-road Equipment - Paving - 1 cement mixer, 1 paver, 1 roller, 1 loader

Off-road Equipment - Pipeline Construction - 1 concrete saw, 1 excavator, 1 rubber tired loader

Off-road Equipment - Pump station construction - 1 crane, 1 forklift, 1 tractor/loader/backhoe, 1 generator set, and 1 welder

Off-road Equipment - Removal of vegetation - 1 Rubber tired dozer, 1 excavator, 1 crawler tractor, and 1 backhoe

Off-road Equipment - Sediment Removal - 1 excavator, 2 rubber tired loaders, and 1 crawler tractor

Trips and VMT - 6 vendor trips added to the removal of vegetation phase and sediment removal phase to account for the water truck emissions. Haul truck trip length set to 7 miles.

On-road Fugitive Dust - Percent Pavement for Removal of Vegetation and Sediment Removal set to 98% to account for the on-site dirt roads

Grading - 94,000 cubic yards of material exported

Construction Off-road Equipment Mitigation - Mitigation - Water exposed areas 3 times per day

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	2100	65940
tblConstructionPhase	NumDays	220.00	89.00
tblConstructionPhase	NumDays	6.00	60.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	3.00	10.00
tblConstructionPhase	PhaseEndDate	10/30/2015	10/31/2015
tblGrading	AcresOfGrading	60.00	30.00
tblGrading	MaterialExported	0.00	94,000.00
tblLandUse	LandUseSquareFeet	0.00	400.00
tblLandUse	LandUseSquareFeet	43,560.00	1,000.00
tblLandUse	LotAcreage	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	98.00

tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	7.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	23.00	10.00
tblTripsAndVMT	WorkerTripNumber	1.00	18.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day															
2015	7.6819	84.3134	64.0462	0.0948	163.0262	3.4705	166.4967	19.5381	3.1927	22.7308	0.0000	9,760.8384	9,760.8384	1.6081	0.0000	9,794.6083
2016	7.1995	79.2551	61.3337	0.0947	54.1163	3.2480	57.3643	8.3295	2.9880	11.3176	0.0000	9,650.3474	9,650.3474	1.6026	0.0000	9,684.0019
Total	14.8814	163.5685	125.3798	0.1895	217.1425	6.7185	223.8609	27.8676	6.1807	34.0484	0.0000	19,411.1858	19,411.1858	3.2107	0.0000	19,478.6102

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day															
2015	7.6819	84.3134	64.0462	0.0948	159.0293	3.4705	162.4998	17.4840	3.1927	20.6766	0.0000	9,760.8384	9,760.8384	1.6081	0.0000	9,794.6083
2016	7.1995	79.2551	61.3337	0.0947	50.1194	3.2480	53.3673	6.2753	2.9880	9.2634	0.0000	9,650.3474	9,650.3474	1.6026	0.0000	9,684.0019
Total	14.8814	163.5685	125.3798	0.1895	209.1486	6.7185	215.8671	23.7593	6.1807	29.9400	0.0000	19,411.1858	19,411.1858	3.2107	0.0000	19,478.6102

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	3.68	0.00	3.57	14.74	0.00	12.07	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pipeline Construction	Trenching	7/1/2015	9/30/2015	5	66	
2	Paving	Paving	10/1/2015	10/31/2015	5	22	
3	Dewatering of Basin	Trenching	11/1/2015	11/30/2015	5	21	
4	Removal of Vegetation	Site Preparation	12/1/2015	12/14/2015	5	10	
5	Sediment Removal	Grading	12/15/2015	3/7/2016	5	60	
6	Pump Station Construction	Building Construction	3/8/2016	7/8/2016	5	89	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Construction	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Construction	Excavators	1	8.00	162	0.38
Pipeline Construction	Rubber Tired Loaders	1	8.00	199	0.36
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Dewatering of Basin	Pumps	4	12.00	84	0.74

Removal of Vegetation	Crawler Tractors	1	8.00	208	0.43
Removal of Vegetation	Excavators	1	8.00	162	0.38
Removal of Vegetation	Rubber Tired Dozers	1	8.00	255	0.40
Removal of Vegetation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sediment Removal	Crawler Tractors	1	8.00	208	0.43
Sediment Removal	Excavators	1	8.00	162	0.38
Sediment Removal	Rubber Tired Loaders	2	8.00	199	0.36
Pump Station Construction	Cranes	1	7.00	226	0.29
Pump Station Construction	Forklifts	1	8.00	89	0.20
Pump Station Construction	Generator Sets	1	8.00	84	0.74
Pump Station Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Pump Station Construction	Welders	1	8.00	46	0.45
Sediment Removal	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Sediment Removal	Rubber Tired Dozers	1	8.00	255	0.40
Sediment Removal	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pipeline Construction	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering of Basin	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Removal of Vegetation	4	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Sediment Removal	9	10.00	6.00	9,294.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Pump Station Construction	5	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Pipeline Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	1.6413	16.6433	9.1124	0.0177		0.8597	0.8597		0.8220	0.8220		1,791.2388	1,791.2388	0.4214		1,800.0890
Total	1.6413	16.6433	9.1124	0.0177		0.8597	0.8597		0.8220	0.8220		1,791.2388	1,791.2388	0.4214		1,800.0890

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0550	0.5764	1.1000e-003	0.0894	8.9000e-004	0.0903	0.0237	8.2000e-004	0.0245		96.0086	96.0086	5.8000e-003		96.1305
Total	0.0411	0.0550	0.5764	1.1000e-003	0.0894	8.9000e-004	0.0903	0.0237	8.2000e-004	0.0245		96.0086	96.0086	5.8000e-003		96.1305

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	1.6413	16.6433	9.1124	0.0177		0.8597	0.8597		0.8220	0.8220	0.0000	1,791.2388	1,791.2388	0.4214		1,800.0890
Total	1.6413	16.6433	9.1124	0.0177		0.8597	0.8597		0.8220	0.8220	0.0000	1,791.2388	1,791.2388	0.4214		1,800.0890

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0550	0.5764	1.1000e-003	0.0894	8.9000e-004	0.0903	0.0237	8.2000e-004	0.0245		96.0086	96.0086	5.8000e-003		96.1305
Total	0.0411	0.0550	0.5764	1.1000e-003	0.0894	8.9000e-004	0.0903	0.0237	8.2000e-004	0.0245		96.0086	96.0086	5.8000e-003		96.1305

3.3 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	1.6411	17.5066	10.9164	0.0161		1.0248	1.0248		0.9437	0.9437		1,676.9294	1,676.9294	0.4933		1,687.2878
Paving	0.1191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7602	17.5066	10.9164	0.0161		1.0248	1.0248		0.9437	0.9437		1,676.9294	1,676.9294	0.4933		1,687.2878

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1028	0.1375	1.4409	2.7400e-003	0.2236	2.2300e-003	0.2258	0.0593	2.0500e-003	0.0613		240.0215	240.0215	0.0145		240.3263
Total	0.1028	0.1375	1.4409	2.7400e-003	0.2236	2.2300e-003	0.2258	0.0593	2.0500e-003	0.0613		240.0215	240.0215	0.0145		240.3263

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	1.6411	17.5066	10.9164	0.0161		1.0248	1.0248		0.9437	0.9437	0.0000	1,676.9294	1,676.9294	0.4933		1,687.2878
Paving	0.1191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7602	17.5066	10.9164	0.0161		1.0248	1.0248		0.9437	0.9437	0.0000	1,676.9294	1,676.9294	0.4933		1,687.2878

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1028	0.1375	1.4409	2.7400e-003	0.2236	2.2300e-003	0.2258	0.0593	2.0500e-003	0.0613		240.0215	240.0215	0.0145		240.3263
Total	0.1028	0.1375	1.4409	2.7400e-003	0.2236	2.2300e-003	0.2258	0.0593	2.0500e-003	0.0613		240.0215	240.0215	0.0145		240.3263

3.4 Dewatering of Basin - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	4.4664	31.8501	23.3778	0.0395		2.3944	2.3944		2.3944	2.3944		3,738.2140	3,738.2140	0.4013		3,746.6403
Total	4.4664	31.8501	23.3778	0.0395		2.3944	2.3944		2.3944	2.3944		3,738.2140	3,738.2140	0.4013		3,746.6403

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0514	0.0688	0.7205	1.3700e-003	0.1118	1.1200e-003	0.1129	0.0296	1.0200e-003	0.0307		120.0108	120.0108	7.2600e-003		120.1631
Total	0.0514	0.0688	0.7205	1.3700e-003	0.1118	1.1200e-003	0.1129	0.0296	1.0200e-003	0.0307		120.0108	120.0108	7.2600e-003		120.1631

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	4.4664	31.8501	23.3778	0.0395		2.3944	2.3944		2.3944	2.3944	0.0000	3,738.2140	3,738.2140	0.4013		3,746.6403
Total	4.4664	31.8501	23.3778	0.0395		2.3944	2.3944		2.3944	2.3944	0.0000	3,738.2140	3,738.2140	0.4013		3,746.6403

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0514	0.0688	0.7205	1.3700e-003	0.1118	1.1200e-003	0.1129	0.0296	1.0200e-003	0.0307		120.0108	120.0108	7.2600e-003		120.1631
Total	0.0514	0.0688	0.7205	1.3700e-003	0.1118	1.1200e-003	0.1129	0.0296	1.0200e-003	0.0307		120.0108	120.0108	7.2600e-003		120.1631

3.5 Removal of Vegetation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7616	32.3745	19.7057	0.0250		1.5537	1.5537		1.4294	1.4294		2,626.0447	2,626.0447	0.7840		2,642.5083
Total	2.7616	32.3745	19.7057	0.0250	6.5523	1.5537	8.1060	3.3675	1.4294	4.7969		2,626.0447	2,626.0447	0.7840		2,642.5083

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0636	0.6086	0.8004	1.3100e-003	1.2555	0.0101	1.2656	0.1321	9.2600e-003	0.1414		132.4671	132.4671	1.1000e-003		132.4902
Worker	0.0514	0.0688	0.7205	1.3700e-003	4.4369	1.1200e-003	4.4360	0.4609	1.0200e-003	0.4619		120.0108	120.0108	7.2600e-003		120.1631
Total	0.1150	0.6773	1.5209	2.6800e-003	5.6924	0.0112	5.7036	0.5930	0.0103	0.6033		252.4778	252.4778	8.3600e-003		252.6533

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.7616	32.3745	19.7057	0.0250		1.5537	1.5537		1.4294	1.4294		2,626.0447	2,626.0447	0.7840		2,642.5083
Total	2.7616	32.3745	19.7057	0.0250	2.5554	1.5537	4.1091	1.3133	1.4294	2.7427	0.0000	2,626.0447	2,626.0447	0.7840		2,642.5083

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0636	0.6086	0.8004	1.3100e-003	1.2555	0.0101	1.2656	0.1321	9.2600e-003	0.1414		132.4671	132.4671	1.1000e-003		132.4902
Worker	0.0514	0.0688	0.7205	1.3700e-003	4.4369	1.1200e-003	4.4380	0.4609	1.0200e-003	0.4619		120.0108	120.0108	7.2600e-003		120.1631
Total	0.1150	0.6773	1.5209	2.6800e-003	5.6924	0.0112	5.7036	0.5930	0.0103	0.6033		252.4778	252.4778	8.3600e-003		252.6533

3.6 Sediment Removal - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					6.5623	0.0000	6.5623	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	5.5690	63.6749	33.2772	0.0497		3.1653	3.1653		2.9120	2.9120		5.224.1225	5.224.1225	1.5596		5.256.8745
Total	5.5690	63.6749	33.2772	0.0497	6.5523	3.1653	9.7176	3.3675	2.9120	6.2795		5.224.1225	5.224.1225	1.5596		5.256.8745

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	1.9979	19.9612	29.2481	0.0424	150.7815	0.2940	151.0755	15.5776	0.2704	15.8480		4,284.2381	4,284.2381	0.0401		4,285.0804
Vendor	0.0636	0.6086	0.8004	1.3100e-003	1.2555	0.0101	1.2656	0.1321	9.2600e-003	0.1414		132.4671	132.4671	1.1000e-003		132.4902
Worker	0.0514	0.0688	0.7205	1.3700e-003	4.4369	1.1200e-003	4.4380	0.4609	1.0200e-003	0.4619		120.0108	120.0108	7.2600e-003		120.1631
Total	2.1129	20.6385	30.7690	0.0450	156.4739	0.3052	156.7791	16.1707	0.2806	16.4513		4,536.7159	4,536.7159	0.0485		4,537.7338

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	5.5690	63.6749	33.2772	0.0497		3.1653	3.1653		2.9120	2.9120	0.0000	5,224.1225	5,224.1225	1.5596		5,256.8745
Total	5.5690	63.6749	33.2772	0.0497	2.5554	3.1653	5.7207	1.3133	2.9120	4.2254	0.0000	5,224.1225	5,224.1225	1.5596		5,256.8745

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	1.9979	19.9612	29.2481	0.0424	150.7815	0.2940	151.0755	15.5776	0.2704	15.8480		4,284.2381	4,284.2381	0.0401		4,285.0804
Vendor	0.0636	0.6086	0.8004	1.3100e-003	1.2555	0.0101	1.2656	0.1321	9.2600e-003	0.1414		132.4671	132.4671	1.1000e-003		132.4902
Worker	0.0514	0.0688	0.7205	1.3700e-003	4.4369	1.1200e-003	4.4380	0.4609	1.0200e-003	0.4619		120.0108	120.0108	7.2600e-003		120.1631
Total	2.1129	20.6385	30.7690	0.0450	156.4739	0.3052	156.7791	16.1707	0.2806	16.4513		4,536.7159	4,536.7159	0.0485		4,537.7338

3.6 Sediment Removal - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	5.3685	60.9122	32.5923	0.0497		3.0071	3.0071		2.7665	2.7665		5,166.8645	5,166.8645	1.5585		5,199.5932
Total	5.3685	60.9122	32.5923	0.0497	6.5523	3.0071	9.5594	3.3675	2.7665	6.1340		5,166.8645	5,166.8645	1.5585		5,199.5932

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	1.7289	17.7426	27.3473	0.0423	41.8715	0.2315	42.1031	4.3690	0.2129	4.5819		4,236.4445	4,236.4445	0.0364		4,237.2089
Vendor	0.0558	0.5382	0.7427	1.3100e-003	1.2555	8.3000e-003	1.2638	0.1321	7.6300e-003	0.1397		131.0353	131.0353	1.0000e-003		131.0562
Worker	0.0463	0.0622	0.6514	1.3700e-003	4.4369	1.0600e-003	4.4380	0.4609	9.7000e-004	0.4619		116.0031	116.0031	6.6900e-003		116.1436
Total	1.8310	18.3430	28.7413	0.0450	47.5639	0.2409	47.8048	4.9620	0.2215	5.1836		4,483.4829	4,483.4829	0.0441		4,484.4087

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	5.3685	60.9122	32.5923	0.0497		3.0071	3.0071		2.7665	2.7665	0.0000	5,166.8645	5,166.8645	1.5585		5,199.5932
Total	5.3685	60.9122	32.5923	0.0497	2.5554	3.0071	5.5625	1.3133	2.7665	4.0798	0.0000	5,166.8645	5,166.8645	1.5585		5,199.5932

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	1.7289	17.7426	27.3473	0.0423	41.8715	0.2315	42.1031	4.3690	0.2129	4.5819		4,236.4445	4,236.4445	0.0364		4,237.2089
Vendor	0.0558	0.5382	0.7427	1.3100e-003	1.2555	8.3000e-003	1.2638	0.1321	7.6300e-003	0.1397		131.0353	131.0353	1.0000e-003		131.0562
Worker	0.0463	0.0622	0.6514	1.3700e-003	4.4369	1.0600e-003	4.4360	0.4609	9.7000e-004	0.4619		116.0031	116.0031	6.6900e-003		116.1436
Total	1.8310	18.3430	28.7413	0.0450	47.5639	0.2409	47.8048	4.9620	0.2215	5.1836		4,483.4829	4,483.4829	0.0441		4,484.4087

3.7 Pump Station Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	2.3563	18.9034	11.7585	0.0183		1.2021	1.2021		1.1444	1.1444		1,785.4073	1,785.4073	0.3954		1,793.7111
Total	2.3563	18.9034	11.7585	0.0183		1.2021	1.2021		1.1444	1.1444		1,785.4073	1,785.4073	0.3954		1,793.7111

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0651	0.6279	0.8665	1.5300e-003	0.0437	9.6800e-003	0.0533	0.0124	8.9000e-003	0.0213		152.8745	152.8745	1.1600e-003		152.8989
Worker	0.0834	0.1119	1.1725	2.4700e-003	0.2012	1.9000e-003	0.2031	0.0534	1.7500e-003	0.0551		208.8056	208.8056	0.0120		209.0585
Total	0.1485	0.7398	2.0389	4.0000e-003	0.2449	0.0116	0.2564	0.0658	0.0107	0.0764		361.6801	361.6801	0.0132		361.9574

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	2.3563	18.9034	11.7585	0.0183		1.2021	1.2021		1.1444	1.1444	0.0000	1,785.4073	1,785.4073	0.3954		1,793.7111
Total	2.3563	18.9034	11.7585	0.0183		1.2021	1.2021		1.1444	1.1444	0.0000	1,785.4073	1,785.4073	0.3954		1,793.7111

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0651	0.6279	0.8665	1.5300e-003	0.0437	9.6800e-003	0.0533	0.0124	8.9000e-003	0.0213		152.8745	152.8745	1.1600e-003		152.8989
Worker	0.0834	0.1119	1.1725	2.4700e-003	0.2012	1.9000e-003	0.2031	0.0534	1.7500e-003	0.0551		208.8056	208.8056	0.0120		209.0585
Total	0.1485	0.7398	2.0389	4.0000e-003	0.2449	0.0116	0.2564	0.0658	0.0107	0.0764		361.6801	361.6801	0.0132		361.9574

APPENDIX B

AERMOD Model Printouts

LOCATION L0000808 406733.541 3774394.846 95.12 VOLUME
LOCATION L0000809 406727.890 3774394.852 95.12 VOLUME
LOCATION L0000810 406722.238 3774394.858 95.12 VOLUME
LOCATION L0000811 406716.586 3774394.865 95.44 VOLUME
LOCATION L0000812 406710.935 3774394.871 96.14 VOLUME
LOCATION L0000813 406705.283 3774394.877 96.84 VOLUME
LOCATION L0000814 406699.632 3774394.883 97.54 VOLUME
LOCATION L0000815 406693.980 3774394.889 98.24 VOLUME
LOCATION L0000816 406688.329 3774394.896 98.88 VOLUME
LOCATION L0000817 406682.677 3774394.902 99.14 VOLUME
LOCATION L0000818 406677.026 3774394.908 99.40 VOLUME
LOCATION L0000819 406672.330 3774392.721 99.44 VOLUME
LOCATION L0000820 406668.489 3774388.576 99.31 VOLUME
LOCATION L0000821 406664.647 3774384.431 99.21 VOLUME
LOCATION L0000822 406660.805 3774380.286 99.15 VOLUME
LOCATION L0000823 406656.963 3774376.141 99.12 VOLUME
LOCATION L0000824 406653.122 3774371.996 99.10 VOLUME
LOCATION L0000825 406649.280 3774367.851 99.08 VOLUME
LOCATION L0000826 406645.438 3774363.706 99.06 VOLUME
LOCATION L0000827 406641.597 3774359.561 99.04 VOLUME
LOCATION L0000828 406637.755 3774355.416 99.02 VOLUME
LOCATION L0000829 406633.913 3774351.271 99.00 VOLUME
LOCATION L0000830 406630.071 3774347.126 98.98 VOLUME
LOCATION L0000831 406626.230 3774342.981 99.07 VOLUME
LOCATION L0000832 406622.388 3774338.836 99.14 VOLUME
LOCATION L0000833 406618.546 3774334.690 99.17 VOLUME
LOCATION L0000834 406614.704 3774330.545 99.18 VOLUME
LOCATION L0000835 406610.863 3774326.400 99.14 VOLUME
LOCATION L0000836 406607.021 3774322.255 99.07 VOLUME
LOCATION L0000837 406603.179 3774318.110 98.97 VOLUME
LOCATION L0000838 406599.338 3774313.965 98.91 VOLUME
LOCATION L0000839 406595.496 3774309.820 98.99 VOLUME
LOCATION L0000840 406591.654 3774305.675 99.05 VOLUME
LOCATION L0000841 406587.812 3774301.530 99.07 VOLUME
LOCATION L0000842 406583.971 3774297.385 99.05 VOLUME
LOCATION L0000843 406580.129 3774293.240 99.00 VOLUME
LOCATION L0000844 406576.287 3774289.095 98.91 VOLUME
LOCATION L0000845 406572.445 3774284.950 98.83 VOLUME
LOCATION L0000846 406568.604 3774280.805 98.82 VOLUME
LOCATION L0000847 406564.762 3774276.660 98.77 VOLUME
LOCATION L0000848 406560.920 3774272.515 98.68 VOLUME
LOCATION L0000849 406557.079 3774268.370 98.56 VOLUME
LOCATION L0000850 406553.235 3774264.227 98.39 VOLUME
LOCATION L0000851 406548.120 3774261.825 98.30 VOLUME
LOCATION L0000852 406543.004 3774259.423 98.18 VOLUME
LOCATION L0000853 406537.889 3774257.021 98.08 VOLUME
LOCATION L0000854 406532.773 3774254.618 97.83 VOLUME
LOCATION L0000855 406527.657 3774252.216 97.60 VOLUME
LOCATION L0000856 406522.542 3774249.814 97.49 VOLUME
LOCATION L0000857 406517.426 3774247.412 97.48 VOLUME
LOCATION L0000858 406512.310 3774245.010 97.58 VOLUME
LOCATION L0000859 406507.106 3774242.809 97.69 VOLUME
LOCATION L0000860 406501.879 3774240.660 97.67 VOLUME
LOCATION L0000861 406496.652 3774238.512 97.70 VOLUME
LOCATION L0000862 406491.424 3774236.364 97.78 VOLUME
LOCATION L0000863 406486.197 3774234.215 97.91 VOLUME
LOCATION L0000864 406480.970 3774232.067 98.09 VOLUME
LOCATION L0000865 406475.743 3774229.918 98.13 VOLUME
LOCATION L0000866 406470.515 3774227.770 98.05 VOLUME
LOCATION L0000867 406465.288 3774225.621 97.81 VOLUME
LOCATION L0000868 406460.061 3774223.473 97.39 VOLUME
LOCATION L0000869 406454.834 3774221.325 97.04 VOLUME

LOCATION L0000870 406449.606 3774219.176 96.77 VOLUME
LOCATION L0000871 406444.379 3774217.028 96.78 VOLUME
LOCATION L0000872 406439.152 3774214.879 96.91 VOLUME
LOCATION L0000873 406433.924 3774212.731 97.14 VOLUME
LOCATION L0000874 406428.697 3774210.583 97.48 VOLUME
LOCATION L0000875 406423.470 3774208.434 97.91 VOLUME
LOCATION L0000876 406418.243 3774206.286 98.36 VOLUME
LOCATION L0000877 406413.015 3774204.137 98.46 VOLUME
LOCATION L0000878 406407.788 3774201.989 98.56 VOLUME
LOCATION L0000879 406402.561 3774199.841 98.66 VOLUME
LOCATION L0000880 406397.334 3774197.692 98.77 VOLUME
LOCATION L0000881 406392.106 3774195.544 98.86 VOLUME
LOCATION L0000882 406386.879 3774193.395 98.90 VOLUME
LOCATION L0000883 406381.652 3774191.247 98.83 VOLUME
LOCATION L0000884 406376.615 3774188.701 98.74 VOLUME
LOCATION L0000885 406371.663 3774185.976 98.65 VOLUME
LOCATION L0000886 406366.712 3774183.252 98.56 VOLUME
LOCATION L0000887 406361.761 3774180.527 98.47 VOLUME
LOCATION L0000888 406356.810 3774177.802 98.27 VOLUME
LOCATION L0000889 406351.858 3774175.077 97.97 VOLUME
LOCATION L0000890 406346.907 3774172.352 97.71 VOLUME
LOCATION L0000891 406341.956 3774169.627 97.47 VOLUME
** End of LINE VOLUME Source ID = RDON
** -----

** Line Source Represented by Separated Volume Sources
** LINE VOLUME Source ID = RDOFFN
** DESCRSRC Road off-site Peck Rd North
** PREFIX
** Length of Side = 4.57
** Configuration = Separated
** Emission Rate = 0.0001099
** Vertical Dimension = 1.92
** SZINIT = 0.89
** Nodes = 3
** 407100.688, 3774387.615, 101.98, 4.15, 4.20
** 407189.400, 3774605.910, 103.54, 4.15, 4.20
** 407280.142, 3774826.284, 106.08, 4.15, 4.20
** -----

LOCATION L0000892 407101.548 3774389.733 102.62 VOLUME
LOCATION L0000893 407104.947 3774398.095 103.42 VOLUME
LOCATION L0000894 407108.345 3774406.458 103.97 VOLUME
LOCATION L0000895 407111.743 3774414.820 104.00 VOLUME
LOCATION L0000896 407115.142 3774423.183 104.00 VOLUME
LOCATION L0000897 407118.540 3774431.545 104.00 VOLUME
LOCATION L0000898 407121.939 3774439.908 104.00 VOLUME
LOCATION L0000899 407125.337 3774448.270 104.00 VOLUME
LOCATION L0000900 407128.735 3774456.633 104.00 VOLUME
LOCATION L0000901 407132.134 3774464.995 104.00 VOLUME
LOCATION L0000902 407135.532 3774473.358 104.00 VOLUME
LOCATION L0000903 407138.931 3774481.720 104.00 VOLUME
LOCATION L0000904 407142.329 3774490.082 104.00 VOLUME
LOCATION L0000905 407145.728 3774498.445 104.00 VOLUME
LOCATION L0000906 407149.126 3774506.807 104.00 VOLUME
LOCATION L0000907 407152.524 3774515.170 104.00 VOLUME
LOCATION L0000908 407155.923 3774523.532 104.00 VOLUME
LOCATION L0000909 407159.321 3774531.895 104.00 VOLUME
LOCATION L0000910 407162.720 3774540.257 104.00 VOLUME
LOCATION L0000911 407166.118 3774548.620 104.00 VOLUME
LOCATION L0000912 407169.516 3774556.982 104.00 VOLUME
LOCATION L0000913 407172.915 3774565.345 104.00 VOLUME

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LOCATION L0000914 407176.313 3774573.707 104.00 VOLUME
LOCATION L0000915 407179.712 3774582.070 104.00 VOLUME
LOCATION L0000916 407183.110 3774590.432 104.00 VOLUME
LOCATION L0000917 407186.508 3774598.795 104.00 VOLUME
LOCATION L0000918 407189.913 3774607.155 104.00 VOLUME
LOCATION L0000919 407193.350 3774615.502 104.00 VOLUME
LOCATION L0000920 407196.786 3774623.848 104.00 VOLUME
LOCATION L0000921 407200.223 3774632.195 104.00 VOLUME
LOCATION L0000922 407203.660 3774640.542 104.00 VOLUME
LOCATION L0000923 407207.097 3774648.889 104.00 VOLUME
LOCATION L0000924 407210.534 3774657.235 104.00 VOLUME
LOCATION L0000925 407213.971 3774665.582 104.00 VOLUME
LOCATION L0000926 407217.408 3774673.929 104.00 VOLUME
LOCATION L0000927 407220.845 3774682.276 104.05 VOLUME
LOCATION L0000928 407224.282 3774690.622 104.08 VOLUME
LOCATION L0000929 407227.719 3774698.969 104.04 VOLUME
LOCATION L0000930 407231.155 3774707.316 104.03 VOLUME
LOCATION L0000931 407234.592 3774715.663 104.25 VOLUME
LOCATION L0000932 407238.029 3774724.009 104.41 VOLUME
LOCATION L0000933 407241.466 3774732.356 104.51 VOLUME
LOCATION L0000934 407244.903 3774740.703 104.69 VOLUME
LOCATION L0000935 407248.340 3774749.049 105.05 VOLUME
LOCATION L0000936 407251.777 3774757.396 105.47 VOLUME
LOCATION L0000937 407255.214 3774765.743 105.95 VOLUME
LOCATION L0000938 407258.651 3774774.090 106.25 VOLUME
LOCATION L0000939 407262.088 3774782.436 106.34 VOLUME
LOCATION L0000940 407265.524 3774790.783 106.39 VOLUME
LOCATION L0000941 407268.961 3774799.130 106.37 VOLUME
LOCATION L0000942 407272.398 3774807.477 106.28 VOLUME
LOCATION L0000943 407275.835 3774815.823 106.25 VOLUME
LOCATION L0000944 407279.272 3774824.170 106.28 VOLUME
** End of LINE VOLUME Source ID = RDOFFN
** -----
**
** Line Source Represented by Separated Volume Sources
** LINE VOLUME Source ID = RDOFFS
** DESCRSRC Road off-site Peck Road south
** PREFIX
** Length of Side = 4.57
** Configuration = Separated
** Emission Rate = 0.0001562
** Vertical Dimension = 1.92
** SZINIT = 0.89
** Nodes = 4
** 407098.623, 3774385.465, 100.35, 4.15, 4.23
** 407041.763, 3774240.075, 102.22, 4.15, 4.23
** 406935.304, 3773985.276, 99.75, 4.15, 4.23
** 406843.666, 3773757.056, 99.94, 4.15, 4.23
** -----
**
LOCATION L0000945 407097.791 3774383.336 101.68 VOLUME
LOCATION L0000946 407094.475 3774374.858 100.69 VOLUME
LOCATION L0000947 407091.160 3774366.380 100.95 VOLUME
LOCATION L0000948 407087.844 3774357.903 101.39 VOLUME
LOCATION L0000949 407084.529 3774349.425 102.02 VOLUME
LOCATION L0000950 407081.213 3774340.947 102.30 VOLUME
LOCATION L0000951 407077.898 3774332.470 102.30 VOLUME
LOCATION L0000952 407074.582 3774323.992 102.14 VOLUME
LOCATION L0000953 407071.267 3774315.514 101.98 VOLUME
LOCATION L0000954 407067.951 3774307.037 101.98 VOLUME
LOCATION L0000955 407064.635 3774298.559 102.22 VOLUME
LOCATION L0000956 407061.320 3774290.081 102.72 VOLUME
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407058.004 3774281.604 103.16 VOLUME
407054.689 3774273.126 103.45 VOLUME
407051.373 3774264.649 103.73 VOLUME
407048.058 3774256.171 103.89 VOLUME
407044.742 3774247.693 103.56 VOLUME
407041.407 3774239.224 103.23 VOLUME
407037.898 3774230.824 102.88 VOLUME
407034.388 3774222.425 102.45 VOLUME
407030.879 3774214.026 102.10 VOLUME
407027.370 3774205.626 101.95 VOLUME
407023.860 3774197.227 101.99 VOLUME
407020.351 3774188.828 102.01 VOLUME
407016.842 3774180.429 101.92 VOLUME
407013.332 3774172.029 101.81 VOLUME
407009.823 3774163.630 101.78 VOLUME
407006.314 3774155.231 101.95 VOLUME
407002.804 3774146.832 102.11 VOLUME
406999.295 3774138.432 102.27 VOLUME
406995.786 3774130.033 102.22 VOLUME
406992.276 3774121.634 102.10 VOLUME
406988.767 3774113.235 101.99 VOLUME
406985.258 3774104.835 101.87 VOLUME
406981.748 3774096.436 101.75 VOLUME
406978.239 3774088.037 101.64 VOLUME
406974.729 3774079.638 101.52 VOLUME
406971.220 3774071.238 101.58 VOLUME
406967.711 3774062.839 101.74 VOLUME
406964.201 3774054.440 101.90 VOLUME
406960.692 3774046.040 102.05 VOLUME
406957.183 3774037.641 101.93 VOLUME
406953.673 3774029.242 101.82 VOLUME
406950.164 3774020.843 101.70 VOLUME
406946.655 3774012.443 101.53 VOLUME
406943.145 3774004.044 101.25 VOLUME
406939.636 3773995.645 100.90 VOLUME
406936.127 3773987.246 100.49 VOLUME
406932.707 3773978.810 100.21 VOLUME
406929.315 3773970.362 100.01 VOLUME
406925.923 3773961.915 100.09 VOLUME
406922.532 3773953.467 100.30 VOLUME
406919.140 3773945.020 100.59 VOLUME
406915.748 3773936.573 100.81 VOLUME
406912.356 3773928.125 100.98 VOLUME
406908.964 3773919.678 100.93 VOLUME
406905.572 3773911.230 100.89 VOLUME
406902.180 3773902.783 100.92 VOLUME
406898.788 3773894.336 100.99 VOLUME
406895.396 3773885.888 100.88 VOLUME
406892.005 3773877.441 100.76 VOLUME
406888.613 3773868.994 100.65 VOLUME
406885.221 3773860.546 100.34 VOLUME
406881.829 3773852.099 99.94 VOLUME
406878.437 3773843.651 99.55 VOLUME
406875.045 3773835.204 99.20 VOLUME
406871.653 3773826.757 99.08 VOLUME
406868.261 3773818.309 99.00 VOLUME
406864.869 3773809.862 99.00 VOLUME
406861.478 3773801.414 99.13 VOLUME
406858.086 3773792.967 99.28 VOLUME
406854.694 3773784.520 99.38 VOLUME
406851.302 3773776.072 99.41 VOLUME
406847.910 3773767.625 99.50 VOLUME
```

LOCATION	L0001019	VOLUME	406844.518	3773759.178	99.65
** End of LINE	VOLUME	Source ID = RDOFFS			
** Source Parameters **					
SRCPARAM	ONSITE	3.332E-07	3.658	19	
AREAVERT	ONSITE	406306.225	3774133.283	406319.845	
3774093.718					
AREAVERT	ONSITE	406324.404	3774042.658	406312.028	
3773994.281					
AREAVERT	ONSITE	406285.245	3773936.640	406264.867	
3773910.439					
AREAVERT	ONSITE	406268.360	3773891.807	406295.725	
3773856.873					
AREAVERT	ONSITE	406317.268	3773834.748	406363.021	
3773823.609					
AREAVERT	ONSITE	406400.040	3773829.077	406410.137	
3773855.159					
AREAVERT	ONSITE	406421.495	3773898.068	406451.363	
3773938.453					
AREAVERT	ONSITE	406485.409	3773975.112	406485.991	
3774022.275					
AREAVERT	ONSITE	406479.004	3774113.690	406446.397	
3774149.791					
** LINE VOLUME	Source ID = RDON	406385.842	3774159.689		
SRCPARAM	L0000745	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000746	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000747	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000748	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000749	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000750	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000751	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000752	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000753	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000754	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000755	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000756	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000757	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000758	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000759	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000760	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000761	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000762	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000763	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000764	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000765	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000766	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000767	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000768	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000769	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000770	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000771	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000772	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000773	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000774	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000775	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000776	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000777	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000778	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000779	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000780	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000781	0.000006293	4.15	2.63	0.89
SRCPARAM	L0000782	0.000006293	4.15	2.63	0.89

** Variable Emission Scenario: "August"	
Variable	Emission
SRCPARAM L0000963	0.000002083
SRCPARAM L0000964	0.000002083
SRCPARAM L0000965	0.000002083
SRCPARAM L0000966	0.000002083
SRCPARAM L0000967	0.000002083
SRCPARAM L0000968	0.000002083
SRCPARAM L0000969	0.000002083
SRCPARAM L0000970	0.000002083
SRCPARAM L0000971	0.000002083
SRCPARAM L0000972	0.000002083
SRCPARAM L0000973	0.000002083
SRCPARAM L0000974	0.000002083
SRCPARAM L0000975	0.000002083
SRCPARAM L0000976	0.000002083
SRCPARAM L0000977	0.000002083
SRCPARAM L0000978	0.000002083
SRCPARAM L0000979	0.000002083
SRCPARAM L0000980	0.000002083
SRCPARAM L0000981	0.000002083
SRCPARAM L0000982	0.000002083
SRCPARAM L0000983	0.000002083
SRCPARAM L0000984	0.000002083
SRCPARAM L0000985	0.000002083
SRCPARAM L0000986	0.000002083
SRCPARAM L0000987	0.000002083
SRCPARAM L0000988	0.000002083
SRCPARAM L0000989	0.000002083
SRCPARAM L0000990	0.000002083
SRCPARAM L0000991	0.000002083
SRCPARAM L0000992	0.000002083
SRCPARAM L0000993	0.000002083
SRCPARAM L0000994	0.000002083
SRCPARAM L0000995	0.000002083
SRCPARAM L0000996	0.000002083
SRCPARAM L0000997	0.000002083
SRCPARAM L0000998	0.000002083
SRCPARAM L0000999	0.000002083
SRCPARAM L0001000	0.000002083
SRCPARAM L0001001	0.000002083
SRCPARAM L0001002	0.000002083
SRCPARAM L0001003	0.000002083
SRCPARAM L0001004	0.000002083
SRCPARAM L0001005	0.000002083
SRCPARAM L0001006	0.000002083
SRCPARAM L0001007	0.000002083
SRCPARAM L0001008	0.000002083
SRCPARAM L0001009	0.000002083
SRCPARAM L0001010	0.000002083
SRCPARAM L0001011	0.000002083
SRCPARAM L0001012	0.000002083
SRCPARAM L0001013	0.000002083
SRCPARAM L0001014	0.000002083
SRCPARAM L0001015	0.000002083
SRCPARAM L0001016	0.000002083
SRCPARAM L0001017	0.000002083
SRCPARAM L0001018	0.000002083
SRCPARAM L0001019	0.000002083

URBANSRC ALL	
** Variable Emissions Type: "By Month (MONTH)"	
Variable	Emissions
EMISFACT L0000745	0.000000000
EMISFACT L0000746	0.000000000
EMISFACT L0000747	0.000000000
EMISFACT L0000748	0.000000000
EMISFACT L0000749	0.000000000
EMISFACT L0000750	0.000000000
EMISFACT L0000751	0.000000000
EMISFACT L0000752	0.000000000
EMISFACT L0000753	0.000000000
EMISFACT L0000754	0.000000000
EMISFACT L0000755	0.000000000
EMISFACT L0000756	0.000000000
EMISFACT L0000757	0.000000000
EMISFACT L0000758	0.000000000
EMISFACT L0000759	0.000000000
EMISFACT L0000760	0.000000000
EMISFACT L0000761	0.000000000
EMISFACT L0000762	0.000000000
EMISFACT L0000763	0.000000000
EMISFACT L0000764	0.000000000
EMISFACT L0000765	0.000000000
EMISFACT L0000766	0.000000000
EMISFACT L0000767	0.000000000
EMISFACT L0000768	0.000000000
EMISFACT L0000769	0.000000000
EMISFACT L0000770	0.000000000
EMISFACT L0000771	0.000000000
EMISFACT L0000772	0.000000000
EMISFACT L0000773	0.000000000
EMISFACT L0000774	0.000000000

** Variable Emissions Type: "By Month (MONTH)"

[illegible]

[illegible]

[illegible]

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*****
**
**
** RE STARTING
** INCLUDED PeckRd.rou
** RE FINISHED
**
** *****
** AERMOD Meteorology Pathway
** *****
**
**
** ME STARTING
** SURFFILE ..\azus6.sfc
** PROFILE ..\azus6.PFL
** SURFDATA 0 2005 Azusa 414810.00 3777470.00
** UAIRDATA 3190 2005
** SITEDATA 99999 2005
** PROFBASE 182.0 METERS
** RE FINISHED
**
** *****
** AERMOD Output Pathway
** *****
**
**
** OU STARTING
** RECTABLE ALLAVE 1ST
** RECTABLE 24 1ST
** Auto-Generated Plotfiles
** PLOTFILE 24 ALL 1ST PeckRd.AD\24H1GALL.PLT 31
** PLOTFILE ANNUAL ALL PeckRd.AD\AN00GALL.PLT 32
** SUMFFILE PeckRd.sum
** RE FINISHED
**
** *****
** Message Summary For AERMOD Model Setup ***
**
----- Summary of Total Messages -----
A Total of 0 Fatal Error Message(s)
A Total of 1 Warning Message(s)
A Total of 0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
ME W396 1240 MEOPEN: Met data from outdated version of
AERMET, version: 12345

*****
*** SETUP Finishes Successfully ***
*****

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

PAGE 1
**MODELOPTs: RegDEFAULT CONC ELEV

OPTIONS SUMMARY *** ** MODEL SETUP
-----
**Model Is Setup For Calculation of Average Concentration Values.

-- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for 276
Source(s),
for Total of 1 Urban Area(s):
Urban Population = 9862049.0 ; Urban Roughness Length =
1.000 m

**Model Uses Regulatory DEFAULT Options:
1. Stack-tip Downwash.
2. Model Accounts for ELEVated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay for URBAN/Non-SO2.
6. Urban Roughness Length of 1.0 Meter Assumed.

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM_10

**Model Calculates 1 Short Term Average(s) of: 24-HR
and Calculates ANNUAL Averages

**This Run Includes: 276 Source(s); 1 Source Group(s);
and 593 Receptor(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 12345

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs Tables of Highest Short Term Values by
Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for
Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values
(SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: C
for Calm Hours
for Missing Hours
m

```

b

for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =
182.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
; Emission Units = GRAMS/SEC
Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.8 MB of RAM.

**Detailed Error/Message File: PeckRd.err
**File for Summary of Results: PeckRd.sum

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

PAGE 2

**MODELOPTs: RegDFault CONC ELEV

*** VOLUME SOURCE

DATA ***

RELEASE	INIT.	NUMBER	EMISSION	RATE	BASE
SOURCE	PART.	INIT.	URBAN	EMISSION	RATE
HEIGHT	SY	SZ	SOURCE	SCALAR	VARY
ID	CATS.			(METERS)	(METERS)
(METERS)	(METERS)	(METERS)	BY		
L0000745	0	0.62930E-05	407089.5	3774390.2	101.4
4.15	2.63	0.89	YES	MONTH	
L0000746	0	0.62930E-05	407083.9	3774390.3	100.8
4.15	2.63	0.89	YES	MONTH	
L0000747	0	0.62930E-05	407078.2	3774390.4	100.3
4.15	2.63	0.89	YES	MONTH	
L0000748	0	0.62930E-05	407072.6	3774390.5	100.1
4.15	2.63	0.89	YES	MONTH	
L0000749	0	0.62930E-05	407066.9	3774390.7	100.0
4.15	2.63	0.89	YES	MONTH	
L0000750	0	0.62930E-05	407061.3	3774390.8	99.8
4.15	2.63	0.89	YES	MONTH	
L0000751	0	0.62930E-05	407055.6	3774390.9	99.6
4.15	2.63	0.89	YES	MONTH	
L0000752	0	0.62930E-05	407050.0	3774391.0	99.5
4.15	2.63	0.89	YES	MONTH	
L0000753	0	0.62930E-05	407044.3	3774391.1	99.3
4.15	2.63	0.89	YES	MONTH	
L0000754	0	0.62930E-05	407038.7	3774391.2	99.1
4.15	2.63	0.89	YES	MONTH	
L0000755	0	0.62930E-05	407033.0	3774391.3	98.9
4.15	2.63	0.89	YES	MONTH	
L0000756	0	0.62930E-05	407027.4	3774391.5	98.8
4.15	2.63	0.89	YES	MONTH	
L0000757	0	0.62930E-05	407021.7	3774391.6	98.6
4.15	2.63	0.89	YES	MONTH	
L0000758	0	0.62930E-05	407016.1	3774391.7	98.4
4.15	2.63	0.89	YES	MONTH	
L0000759	0	0.62930E-05	407010.4	3774391.8	98.1
4.15	2.63	0.89	YES	MONTH	
L0000760	0	0.62930E-05	407004.8	3774391.9	97.9
4.15	2.63	0.89	YES	MONTH	
L0000761	0	0.62930E-05	406999.1	3774392.0	97.6
4.15	2.63	0.89	YES	MONTH	
L0000762	0	0.62930E-05	406993.5	3774392.1	97.4
4.15	2.63	0.89	YES	MONTH	
L0000763	0	0.62930E-05	406987.8	3774392.2	97.2
4.15	2.63	0.89	YES	MONTH	
L0000764	0	0.62930E-05	406982.2	3774392.4	97.0
4.15	2.63	0.89	YES	MONTH	

*** AERMOD - VERSION 14134 ***	*** Peck Road Spreading Basin
*** 06/18/14	
*** AERMET - VERSION 12345 ***	*** Diesel PM10 Emissions
*** 13:01:31	
PAGE 3	
**MODELOPTs: RegDFault CONC	ELEV
DATA ***	*** VOLUME SOURCE
RELEASE INIT. NUMBER EMISSION RATE	BASE
SOURCE PART. (GRAMS/SEC)	INIT. URBAN EMISSION RATE
HEIGHT SY SZ SOURCE SCALAR VARY	X Y ELEV.
ID CATS.	
(METERS) (METERS) (METERS) BY	
---	---
---	---
L0000765	0 0.62930E-05 406863.5 3774394.7 94.9
4.15 2.63	0.89 YES MONTH
L0000766	0 0.62930E-05 406857.9 3774394.7 94.8
4.15 2.63	0.89 YES MONTH
L0000767	0 0.62930E-05 406852.2 3774394.7 94.6
4.15 2.63	0.89 YES MONTH
L0000768	0 0.62930E-05 406846.6 3774394.7 94.5
4.15 2.63	0.89 YES MONTH
L0000769	0 0.62930E-05 406840.9 3774394.7 94.3
4.15 2.63	0.89 YES MONTH
L0000770	0 0.62930E-05 406835.3 3774394.7 94.3
4.15 2.63	0.89 YES MONTH
L0000771	0 0.62930E-05 406829.6 3774394.7 94.3
4.15 2.63	0.89 YES MONTH
L0000772	0 0.62930E-05 406824.0 3774394.7 94.3
4.15 2.63	0.89 YES MONTH
L0000773	0 0.62930E-05 406818.3 3774394.8 94.3
4.15 2.63	0.89 YES MONTH
L0000774	0 0.62930E-05 406812.7 3774394.8 94.3
4.15 2.63	0.89 YES MONTH
L0000775	0 0.62930E-05 406807.0 3774394.8 94.3
4.15 2.63	0.89 YES MONTH
L0000776	0 0.62930E-05 406801.4 3774394.8 94.4
4.15 2.63	0.89 YES MONTH
L0000777	0 0.62930E-05 406795.7 3774394.8 94.5
4.15 2.63	0.89 YES MONTH
L0000778	0 0.62930E-05 406790.1 3774394.8 94.6
4.15 2.63	0.89 YES MONTH
L0000779	0 0.62930E-05 406784.4 3774394.8 94.6
4.15 2.63	0.89 YES MONTH
L0000780	0 0.62930E-05 406778.8 3774394.8 94.7
4.15 2.63	0.89 YES MONTH
L0000781	0 0.62930E-05 406773.1 3774394.8 94.8
4.15 2.63	0.89 YES MONTH
L0000782	0 0.62930E-05 406767.5 3774394.8 94.9
4.15 2.63	0.89 YES MONTH
L0000783	0 0.62930E-05 406761.8 3774394.8 95.0
4.15 2.63	0.89 YES MONTH
L0000784	0 0.62930E-05 406756.1 3774394.8 95.0
4.15 2.63	0.89 YES MONTH

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

DATA *** ** VOLUME SOURCE

RELEASE		NUMBER EMISSION RATE				BASE	
SOURCE	INIT.	INIT.	URBAN	EMISSION RATE	X	Y	
HEIGHT	SY	SZ	SOURCE	SCALAR VARY	(METERS)	(METERS)	
ID	CATS.			BY			
(METERS)	(METERS)	(METERS)					
---	---	---	---	---	---	---	
---	---	---	---	---	---	---	
L0000805	0	0.62930E-05	406750.5	3774394.8	95.1		
4.15	2.63	0.89	YES	MONTH			
L0000806	0	0.62930E-05	406744.8	3774394.8	95.1		
4.15	2.63	0.89	YES	MONTH			
L0000807	0	0.62930E-05	406739.2	3774394.8	95.1		
4.15	2.63	0.89	YES	MONTH			
L0000808	0	0.62930E-05	406733.5	3774394.8	95.1		
4.15	2.63	0.89	YES	MONTH			
L0000809	0	0.62930E-05	406727.9	3774394.9	95.1		
4.15	2.63	0.89	YES	MONTH			
L0000810	0	0.62930E-05	406722.2	3774394.9	95.1		
4.15	2.63	0.89	YES	MONTH			
L0000811	0	0.62930E-05	406716.6	3774394.9	95.4		
4.15	2.63	0.89	YES	MONTH			
L0000812	0	0.62930E-05	406710.9	3774394.9	96.1		
4.15	2.63	0.89	YES	MONTH			
L0000813	0	0.62930E-05	406705.3	3774394.9	96.8		
4.15	2.63	0.89	YES	MONTH			
L0000814	0	0.62930E-05	406699.6	3774394.9	97.5		
4.15	2.63	0.89	YES	MONTH			
L0000815	0	0.62930E-05	406694.0	3774394.9	98.2		
4.15	2.63	0.89	YES	MONTH			
L0000816	0	0.62930E-05	406688.3	3774394.9	98.9		
4.15	2.63	0.89	YES	MONTH			
L0000817	0	0.62930E-05	406682.7	3774394.9	99.1		
4.15	2.63	0.89	YES	MONTH			
L0000818	0	0.62930E-05	406677.0	3774394.9	99.4		
4.15	2.63	0.89	YES	MONTH			
L0000819	0	0.62930E-05	406672.3	3774392.7	99.4		
4.15	2.63	0.89	YES	MONTH			
L0000820	0	0.62930E-05	406668.5	3774388.6	99.3		
4.15	2.63	0.89	YES	MONTH			
L0000821	0	0.62930E-05	406664.6	3774384.4	99.2		
4.15	2.63	0.89	YES	MONTH			
L0000822	0	0.62930E-05	406660.8	3774380.3	99.1		
4.15	2.63	0.89	YES	MONTH			
L0000823	0	0.62930E-05	406657.0	3774376.1	99.1		
4.15	2.63	0.89	YES	MONTH			
L0000824	0	0.62930E-05	406653.1	3774372.0	99.1		
4.15	2.63	0.89	YES	MONTH			

*** AERMOD - VERSION 14134 ***	*** Peck Road Spreading Basin
*** 06/18/14	
*** AERMET - VERSION 12345 ***	*** Diesel PM10 Emissions
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**MODELOPTs: RegDFault CONC	ELEV
DATA ***	
*** VOLUME SOURCE	
NUMBER EMISSION RATE	
RELEASE	INIT. INIT. URBAN EMISSION RATE
SOURCE	PART. (GRAMS/SEC) X Y
HEIGHT	SY SZ SOURCE SCALAR VARY
ID	CATS. (METERS) (METERS) (METERS)
(METERS) (METERS) (METERS)	BY
- - - - -	
- - - - -	
L0000865	0 0.62930E-05 406475.7 3774229.9 98.1
4.15 2.63	0.89 YES MONTH
L0000866	0 0.62930E-05 406470.5 3774227.8 98.0
4.15 2.63	0.89 YES MONTH
L0000867	0 0.62930E-05 406465.3 3774225.6 97.8
4.15 2.63	0.89 YES MONTH
L0000868	0 0.62930E-05 406460.1 3774223.5 97.4
4.15 2.63	0.89 YES MONTH
L0000869	0 0.62930E-05 406454.8 3774221.3 97.0
4.15 2.63	0.89 YES MONTH
L0000870	0 0.62930E-05 406449.6 3774219.2 96.8
4.15 2.63	0.89 YES MONTH
L0000871	0 0.62930E-05 406444.4 3774217.0 96.8
4.15 2.63	0.89 YES MONTH
L0000872	0 0.62930E-05 406439.2 3774214.9 96.9
4.15 2.63	0.89 YES MONTH
L0000873	0 0.62930E-05 406433.9 3774212.7 97.1
4.15 2.63	0.89 YES MONTH
L0000874	0 0.62930E-05 406428.7 3774210.6 97.5
4.15 2.63	0.89 YES MONTH
L0000875	0 0.62930E-05 406423.5 3774208.4 97.9
4.15 2.63	0.89 YES MONTH
L0000876	0 0.62930E-05 406418.2 3774206.3 98.4
4.15 2.63	0.89 YES MONTH
L0000877	0 0.62930E-05 406413.0 3774204.1 98.5
4.15 2.63	0.89 YES MONTH
L0000878	0 0.62930E-05 406407.8 3774202.0 98.6
4.15 2.63	0.89 YES MONTH
L0000879	0 0.62930E-05 406402.6 3774199.8 98.7
4.15 2.63	0.89 YES MONTH
L0000880	0 0.62930E-05 406397.3 3774197.7 98.8
4.15 2.63	0.89 YES MONTH
L0000881	0 0.62930E-05 406392.1 3774195.5 98.9
4.15 2.63	0.89 YES MONTH
L0000882	0 0.62930E-05 406386.9 3774193.4 98.9
4.15 2.63	0.89 YES MONTH
L0000883	0 0.62930E-05 406381.7 3774191.2 98.8
4.15 2.63	0.89 YES MONTH
L0000884	0 0.62930E-05 406376.6 3774188.7 98.7
4.15 2.63	0.89 YES MONTH

*** AERMOD - VERSION 14134 ***	*** Peck Road Spreading Basin
*** 06/18/14	
*** AERMET - VERSION 12345 ***	*** Diesel PM10 Emissions
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PAGE 6	
**MODELOPTs: RegDFault CONC	ELEV
DATA ***	*** VOLUME SOURCE
RELEASE INIT. NUMBER EMISSION RATE	BASE
SOURCE PART. (GRAMS/SEC)	X Y ELEV.
HEIGHT SY SZ SOURCE SCALAR VARY	(METERS) (METERS) (METERS)
ID CATS.	BY
(METERS) (METERS) (METERS)	
- - - - -	- - - - -
- - - - -	- - - - -
L0000905	0 0.20740E-05 407145.7 3774498.4 104.0
4.15 4.20	0.89 YES MONTH
L0000906	0 0.20740E-05 407149.1 3774506.8 104.0
4.15 4.20	0.89 YES MONTH
L0000907	0 0.20740E-05 407152.5 3774515.2 104.0
4.15 4.20	0.89 YES MONTH
L0000908	0 0.20740E-05 407155.9 3774523.5 104.0
4.15 4.20	0.89 YES MONTH
L0000909	0 0.20740E-05 407159.3 3774531.9 104.0
4.15 4.20	0.89 YES MONTH
L0000910	0 0.20740E-05 407162.7 3774540.3 104.0
4.15 4.20	0.89 YES MONTH
L0000911	0 0.20740E-05 407166.1 3774548.6 104.0
4.15 4.20	0.89 YES MONTH
L0000912	0 0.20740E-05 407169.5 3774557.0 104.0
4.15 4.20	0.89 YES MONTH
L0000913	0 0.20740E-05 407172.9 3774565.3 104.0
4.15 4.20	0.89 YES MONTH
L0000914	0 0.20740E-05 407176.3 3774573.7 104.0
4.15 4.20	0.89 YES MONTH
L0000915	0 0.20740E-05 407179.7 3774582.1 104.0
4.15 4.20	0.89 YES MONTH
L0000916	0 0.20740E-05 407183.1 3774590.4 104.0
4.15 4.20	0.89 YES MONTH
L0000917	0 0.20740E-05 407186.5 3774598.8 104.0
4.15 4.20	0.89 YES MONTH
L0000918	0 0.20740E-05 407189.9 3774607.2 104.0
4.15 4.20	0.89 YES MONTH
L0000919	0 0.20740E-05 407193.3 3774615.5 104.0
4.15 4.20	0.89 YES MONTH
L0000920	0 0.20740E-05 407196.8 3774623.8 104.0
4.15 4.20	0.89 YES MONTH
L0000921	0 0.20740E-05 407200.2 3774632.2 104.0
4.15 4.20	0.89 YES MONTH
L0000922	0 0.20740E-05 407203.7 3774640.5 104.0
4.15 4.20	0.89 YES MONTH
L0000923	0 0.20740E-05 407207.1 3774648.9 104.0
4.15 4.20	0.89 YES MONTH
L0000924	0 0.20740E-05 407210.5 3774657.2 104.0
4.15 4.20	0.89 YES MONTH

*** AERMOD - VERSION 14134 ***	*** Peck Road Spreading Basin
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*** AERMET - VERSION 12345 ***	*** Diesel PM10 Emissions
*** 13:01:31	
PAGE 7	
**MODELOPTs: RegDFault CONC	ELEV
DATA ***	*** VOLUME SOURCE
RELEASE INIT. INIT. URBAN EMISSION RATE	BASE
SOURCE PART. (GRAMS/SEC) X Y	ELEV.
HEIGHT SY SZ SOURCE SCALAR VARY	(METERS) (METERS)
ID CATS.	BY
(METERS) (METERS) (METERS)	
---	---
---	---
L0000945	0 0.20830E-05 407097.8 3774383.3 101.7
4.15 4.23	0.89 YES MONTH
L0000946	0 0.20830E-05 407094.5 3774374.9 100.7
4.15 4.23	0.89 YES MONTH
L0000947	0 0.20830E-05 407091.2 3774366.4 101.0
4.15 4.23	0.89 YES MONTH
L0000948	0 0.20830E-05 407087.8 3774357.9 101.4
4.15 4.23	0.89 YES MONTH
L0000949	0 0.20830E-05 407084.5 3774349.4 102.0
4.15 4.23	0.89 YES MONTH
L0000950	0 0.20830E-05 407081.2 3774340.9 102.3
4.15 4.23	0.89 YES MONTH
L0000951	0 0.20830E-05 407077.9 3774332.5 102.3
4.15 4.23	0.89 YES MONTH
L0000952	0 0.20830E-05 407074.6 3774324.0 102.1
4.15 4.23	0.89 YES MONTH
L0000953	0 0.20830E-05 407071.3 3774315.5 102.0
4.15 4.23	0.89 YES MONTH
L0000954	0 0.20830E-05 407068.0 3774307.0 102.0
4.15 4.23	0.89 YES MONTH
L0000955	0 0.20830E-05 407064.6 3774298.6 102.2
4.15 4.23	0.89 YES MONTH
L0000956	0 0.20830E-05 407061.3 3774290.1 102.7
4.15 4.23	0.89 YES MONTH
L0000957	0 0.20830E-05 407058.0 3774281.6 103.2
4.15 4.23	0.89 YES MONTH
L0000958	0 0.20830E-05 407054.7 3774273.1 103.5
4.15 4.23	0.89 YES MONTH
L0000959	0 0.20830E-05 407051.4 3774264.6 103.7
4.15 4.23	0.89 YES MONTH
L0000960	0 0.20830E-05 407048.1 3774256.2 103.9
4.15 4.23	0.89 YES MONTH
L0000961	0 0.20830E-05 407044.7 3774247.7 103.6
4.15 4.23	0.89 YES MONTH
L0000962	0 0.20830E-05 407041.4 3774239.2 103.2
4.15 4.23	0.89 YES MONTH
L0000963	0 0.20830E-05 407037.9 3774230.8 102.9
4.15 4.23	0.89 YES MONTH
L0000964	0 0.20830E-05 407034.4 3774222.4 102.5
4.15 4.23	0.89 YES MONTH

*** AERMOD - VERSION 14134 ***	*** Peck Road Spreading Basin
*** 06/18/14	
*** AERMET - VERSION 12345 ***	*** Diesel PM10 Emissions
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**MODELOPTs: RegDFault CONC	ELEV
DATA ***	*** VOLUME SOURCE
RELEASE INIT. INIT. URBAN EMISSION RATE	BASE
SOURCE PART. (GRAMS/SEC)	X Y ELEV.
HEIGHT SY SZ SOURCE SCALAR VARY	(METERS) (METERS)
ID CATS.	BY
(METERS) (METERS) (METERS)	
- - - - -	- - - - -
- - - - -	- - - - -
L0000985	0 0.20830E-05 406960.7 3774046.0 102.0
4.15 4.23	0.89 YES MONTH
L0000986	0 0.20830E-05 406957.2 3774037.6 101.9
4.15 4.23	0.89 YES MONTH
L0000987	0 0.20830E-05 406953.7 3774029.2 101.8
4.15 4.23	0.89 YES MONTH
L0000988	0 0.20830E-05 406950.2 3774020.8 101.7
4.15 4.23	0.89 YES MONTH
L0000989	0 0.20830E-05 406946.7 3774012.4 101.5
4.15 4.23	0.89 YES MONTH
L0000990	0 0.20830E-05 406943.1 3774004.0 101.2
4.15 4.23	0.89 YES MONTH
L0000991	0 0.20830E-05 406939.6 3773995.6 100.9
4.15 4.23	0.89 YES MONTH
L0000992	0 0.20830E-05 406936.1 3773987.2 100.5
4.15 4.23	0.89 YES MONTH
L0000993	0 0.20830E-05 406932.7 3773978.8 100.2
4.15 4.23	0.89 YES MONTH
L0000994	0 0.20830E-05 406929.3 3773970.4 100.0
4.15 4.23	0.89 YES MONTH
L0000995	0 0.20830E-05 406925.9 3773961.9 100.1
4.15 4.23	0.89 YES MONTH
L0000996	0 0.20830E-05 406922.5 3773953.5 100.3
4.15 4.23	0.89 YES MONTH
L0000997	0 0.20830E-05 406919.1 3773945.0 100.6
4.15 4.23	0.89 YES MONTH
L0000998	0 0.20830E-05 406915.7 3773936.6 100.8
4.15 4.23	0.89 YES MONTH
L0000999	0 0.20830E-05 406912.4 3773928.1 101.0
4.15 4.23	0.89 YES MONTH
L0001000	0 0.20830E-05 406909.0 3773919.7 100.9
4.15 4.23	0.89 YES MONTH
L0001001	0 0.20830E-05 406905.6 3773911.2 100.9
4.15 4.23	0.89 YES MONTH
L0001002	0 0.20830E-05 406902.2 3773902.8 100.9
4.15 4.23	0.89 YES MONTH
L0001003	0 0.20830E-05 406898.8 3773894.3 101.0
4.15 4.23	0.89 YES MONTH
L0001004	0 0.20830E-05 406895.4 3773885.9 100.9
4.15 4.23	0.89 YES MONTH

L0001005	0	0.20830E-05	406892.0	3773877.4	100.8
4.15	0.89	YES	MONTH		
L0001006	0	0.20830E-05	406888.6	3773869.0	100.6
4.15	0.89	YES	MONTH		
L0001007	0	0.20830E-05	406885.2	3773860.5	100.3
4.15	0.89	YES	MONTH		
L0001008	0	0.20830E-05	406881.8	3773852.1	99.9
4.15	0.89	YES	MONTH		
L0001009	0	0.20830E-05	406878.4	3773843.7	99.5
4.15	0.89	YES	MONTH		
L0001010	0	0.20830E-05	406875.0	3773835.2	99.2
4.15	0.89	YES	MONTH		
L0001011	0	0.20830E-05	406871.7	3773826.8	99.1
4.15	0.89	YES	MONTH		
L0001012	0	0.20830E-05	406868.3	3773818.3	99.0
4.15	0.89	YES	MONTH		
L0001013	0	0.20830E-05	406864.9	3773809.9	99.0
4.15	0.89	YES	MONTH		
L0001014	0	0.20830E-05	406861.5	3773801.4	99.1
4.15	0.89	YES	MONTH		
L0001015	0	0.20830E-05	406858.1	3773793.0	99.3
4.15	0.89	YES	MONTH		
L0001016	0	0.20830E-05	406854.7	3773784.5	99.4
4.15	0.89	YES	MONTH		
L0001017	0	0.20830E-05	406851.3	3773776.1	99.4
4.15	0.89	YES	MONTH		
L0001018	0	0.20830E-05	406847.9	3773767.6	99.5
4.15	0.89	YES	MONTH		
L0001019	0	0.20830E-05	406844.5	3773759.2	99.6
4.15	0.89	YES	MONTH		

*** AERMOD - VERSION 14134 ***

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**MODELOPTs: RegDFAULT CONC ELEV

DATA ***

*** AREAPOLY SOURCE

RELEASE	NUMBER	NUMBER	EMISSION	RATE	LOCATION	OF	AREA	BASE
SOURCE	PART.	(GRAMS/SEC	X	Y	ELEV.			
HEIGHT	OF	VERTS.	SZ	SOURCE	SCALAR	VARY		
ID	CATS.	/METER**2)	(METERS)	(METERS)	(METERS)	(METERS)		
(METERS)		(METERS)	BY					
ONSITE	0	0.33320E-06	406306.2	3774133.3	98.7			
3.66	19	0.00	YES	MONTH				

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
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**MODELOPTs: RegDFault CONC ELEV

*** SOURCE IDs DEFINING

SOURCE GROUPS ***

SRCGROUP ID	SOURCE
IDs	-----
-----	-----

ALL	ONSITE	L0000745	L0000746	L0000747
L0000748	L0000749	L0000750	L0000751	
L0000752	L0000753	L0000754	L0000755	
L0000756	L0000757	L0000758	L0000759	
L0000760	L0000761	L0000762	L0000763	
L0000764	L0000765	L0000766	L0000767	
L0000768	L0000769	L0000770	L0000771	
L0000772	L0000773	L0000774	L0000775	
L0000776	L0000777	L0000778	L0000779	
L0000780	L0000781	L0000782	L0000783	
L0000784	L0000785	L0000786	L0000787	
L0000788	L0000789	L0000790	L0000791	
L0000792	L0000793	L0000794	L0000795	
L0000796	L0000797	L0000798	L0000799	
L0000800	L0000801	L0000802	L0000803	
L0000804	L0000805	L0000806	L0000807	
L0000808	L0000809	L0000810	L0000811	
L0000812	L0000813	L0000814	L0000815	
L0000816	L0000817	L0000818	L0000819	
L0000820	L0000821	L0000822	L0000823	
L0000824	L0000825	L0000826	L0000827	
L0000828	L0000829	L0000830	L0000831	
L0000832	L0000833	L0000834	L0000835	
L0000836	L0000837	L0000838	L0000839	
L0000840	L0000841	L0000842	L0000843	
L0000844	L0000845	L0000846	L0000847	
L0000848	L0000849	L0000850	L0000851	
L0000852	L0000853	L0000854	L0000855	
L0000856	L0000857	L0000858	L0000859	
L0000860	L0000861	L0000862	L0000863	

L0000864	L0000865	L0000866	L0000867
L0000868	L0000869	L0000870	L0000871
L0000872	L0000873	L0000874	L0000875
L0000876	L0000877	L0000878	L0000879
L0000880	L0000881	L0000882	L0000883
L0000884	L0000885	L0000886	L0000887
L0000888	L0000889	L0000890	L0000891
L0000892	L0000893	L0000894	L0000895
L0000896	L0000897	L0000898	L0000899
L0000900	L0000901	L0000902	L0000903

*** AERMOD - VERSION 14134 *** *** Peck Road Spreading Basin
*** 06/18/14
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**MODELOPTs: RegDFault CONC ELEV

SOURCE GROUPS ***
*** SOURCE IDs DEFINING

SRCGROUP ID IDS	SOURCE									
-----	-----									
L0000908	L0000904	L0000905	L0000906	L0000907						
	L0000909	L0000910	L0000911							
L0000916	L0000912	L0000913	L0000914	L0000915						
	L0000917	L0000918	L0000919							
L0000924	L0000920	L0000921	L0000922	L0000923						
	L0000925	L0000926	L0000927							
L0000932	L0000928	L0000929	L0000930	L0000931						
	L0000933	L0000934	L0000935							
L0000940	L0000936	L0000937	L0000938	L0000939						
	L0000941	L0000942	L0000943							
L0000948	L0000944	L0000945	L0000946	L0000947						
	L0000949	L0000950	L0000951							
L0000956	L0000952	L0000953	L0000954	L0000955						
	L0000957	L0000958	L0000959							
L0000964	L0000960	L0000961	L0000962	L0000963						
	L0000965	L0000966	L0000967							
L0000972	L0000968	L0000969	L0000970	L0000971						
	L0000973	L0000974	L0000975							
L0000980	L0000976	L0000977	L0000978	L0000979						
	L0000981	L0000982	L0000983							
L0000988	L0000984	L0000985	L0000986	L0000987						
	L0000989	L0000990	L0000991							
L0000996	L0000992	L0000993	L0000994	L0000995						
	L0000997	L0000998	L0000999							
L0001004	L0001000	L0001001	L0001002	L0001003						
	L0001005	L0001006	L0001007							
L0001012	L0001008	L0001009	L0001010	L0001011						
	L0001013	L0001014	L0001015							
L0001016	L0001016	L0001017	L0001018	L0001019						

*** AERMOD - VERSION 14134 *** *** Peck Road Spreading Basin
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*** AERMET - VERSION 12345 *** *** Diesel PM10 Emissions
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**MODELOPTs: RegDFault CONC ELEV

URBAN SOURCES ***
*** SOURCE IDs DEFINED AS

URBAN ID IDS	URBAN POP	SOURCE									
-----	-----	-----									
L0000747	9862049	ONSITE	L0000745	L0000746							
L0000751	L0000748	L0000749	L0000750								
L0000756	L0000752	L0000753	L0000754	L0000755							
	L0000757	L0000758	L0000759								
L0000764	L0000760	L0000761	L0000762	L0000763							
	L0000765	L0000766	L0000767								
L0000772	L0000768	L0000769	L0000770	L0000771							
	L0000773	L0000774	L0000775								
L0000780	L0000776	L0000777	L0000778	L0000779							
	L0000781	L0000782	L0000783								
L0000788	L0000784	L0000785	L0000786	L0000787							
	L0000789	L0000790	L0000791								
L0000796	L0000792	L0000793	L0000794	L0000795							
	L0000797	L0000798	L0000799								
L0000804	L0000800	L0000801	L0000802	L0000803							
	L0000805	L0000806	L0000807								
L0000812	L0000808	L0000809	L0000810	L0000811							
	L0000813	L0000814	L0000815								
L0000820	L0000816	L0000817	L0000818	L0000819							
	L0000821	L0000822	L0000823								
L0000828	L0000824	L0000825	L0000826	L0000827							
	L0000829	L0000830	L0000831								
L0000836	L0000832	L0000833	L0000834	L0000835							
	L0000837	L0000838	L0000839								
L0000844	L0000840	L0000841	L0000842	L0000843							
	L0000845	L0000846	L0000847								
L0000852	L0000848	L0000849	L0000850	L0000851							
	L0000853	L0000854	L0000855								

L0000856 , L0000857 , L0000858 , L0000859
 , L0000861 , L0000862 , L0000863 ,
L0000864 , L0000865 , L0000866 , L0000867
 , L0000869 , L0000870 , L0000871 ,
L0000872 , L0000873 , L0000874 , L0000875
 , L0000877 , L0000878 , L0000879 ,
L0000880 , L0000881 , L0000882 , L0000883
 , L0000885 , L0000886 , L0000887 ,
L0000888 , L0000889 , L0000890 , L0000891
 , L0000893 , L0000894 , L0000895 ,
L0000896 , L0000897 , L0000898 , L0000899
 , L0000901 , L0000902 , L0000903 ,

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
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**MODELOPTs: RegDEFAULT CONC ELEV

URBAN SOURCES *** ** SOURCE IDS DEFINED AS

URBAN ID	URBAN POP	SOURCE
-----	-----	-----
-	-	-
L0000908	L0000904 , L0000905 , L0000906 , L0000907 , L0000909 , L0000910 , L0000911 ,	
L0000916	L0000912 , L0000913 , L0000914 , L0000915 , L0000917 , L0000918 , L0000919 ,	
L0000924	L0000920 , L0000921 , L0000922 , L0000923 , L0000925 , L0000926 , L0000927 ,	
L0000932	L0000928 , L0000929 , L0000930 , L0000931 , L0000933 , L0000934 , L0000935 ,	
L0000940	L0000936 , L0000937 , L0000938 , L0000939 , L0000941 , L0000942 , L0000943 ,	
L0000948	L0000944 , L0000945 , L0000946 , L0000947 , L0000949 , L0000950 , L0000951 ,	
L0000956	L0000952 , L0000953 , L0000954 , L0000955 , L0000957 , L0000958 , L0000959 ,	
L0000964	L0000960 , L0000961 , L0000962 , L0000963 , L0000965 , L0000966 , L0000967 ,	
L0000972	L0000968 , L0000969 , L0000970 , L0000971 , L0000973 , L0000974 , L0000975 ,	
L0000980	L0000976 , L0000977 , L0000978 , L0000979 , L0000981 , L0000982 , L0000983 ,	
L0000988	L0000984 , L0000985 , L0000986 , L0000987 , L0000989 , L0000990 , L0000991 ,	
L0000996	L0000992 , L0000993 , L0000994 , L0000995 , L0000997 , L0000998 , L0000999 ,	
L0001004	L0001000 , L0001001 , L0001002 , L0001003 , L0001005 , L0001006 , L0001007 ,	
L0001012	L0001008 , L0001009 , L0001010 , L0001011 , L0001013 , L0001014 , L0001015 ,	
L0001016	L0001016 , L0001017 , L0001018 , L0001019 ,	

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
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**MODELOPTs: RegDEFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

- - - - -
- - - - -

SOURCE ID = ONSITE ; SOURCE TYPE = AREAPOLY ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000745 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000746 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000747 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000748 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000749 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
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**MODELOPTs: RegDEFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

- - - - -
- - - - -

SOURCE ID = I0000750 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000751 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000752 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000753 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000754 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000755 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

- - - - -
- - - - -

SOURCE ID = I0000756 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000757 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000758 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000759 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000760 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000761 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
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*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

- - - - -
- - - - -

SOURCE ID = I0000762 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000763 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000764 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000765 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000766 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000767 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000768 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000769 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000770 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000771 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000772 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000773 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000774 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000775 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000776 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000777 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000778 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000779 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000780 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000781 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000782 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000783 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000784 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000785 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000786 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000787 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000788 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000789 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000790 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000791 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDEFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000792 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000793 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000794 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000795 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000796 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000797 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDEFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000798 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000799 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000800 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000801 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000802 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000803 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTS: RegDEFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000804 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000805 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000806 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000807 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000808 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000809 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTS: RegDEFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000810 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000811 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000812 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000813 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000814 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000815 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000816 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000817 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000818 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000819 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000820 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000821 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000822 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000823 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000824 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000825 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000826 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000827 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JULY JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000828 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000829 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000830 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000831 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000832 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000833 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JULY JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000834 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000835 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000836 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000837 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000838 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000839 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000840 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000841 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000842 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000843 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000844 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000845 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000846 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000847 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000848 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000849 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000850 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000851 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000852 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000853 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000854 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000855 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000856 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000857 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000858 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000859 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000860 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000861 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000862 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000863 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000864 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000865 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000866 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000867 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000868 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000869 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000870 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000871 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000872 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000873 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000874 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000875 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000876 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000877 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000878 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000879 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000880 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000881 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000882 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000883 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000884 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000885 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000886 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000887 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000888 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000889 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000890 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000891 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000892 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000893 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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- - - - -

SOURCE ID = I0000894 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000895 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000896 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000897 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000898 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000899 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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- - - - -

SOURCE ID = L0000900 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0000901 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0000902 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0000903 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0000904 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0000905 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = L0000906 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0000907 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0000908 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0000909 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0000910 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0000911 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000912 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000913 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000914 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000915 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000916 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000917 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000918 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000919 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000920 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000921 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000922 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000923 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000924 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000925 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000926 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000927 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000928 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000929 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000930 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000931 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000932 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000933 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000934 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000935 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000936 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000937 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000938 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000939 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000940 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000941 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000942 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000943 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000944 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000945 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000946 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000947 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000948 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000949 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000950 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000951 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000952 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000953 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000954 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000955 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000956 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000957 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000958 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000959 ; SOURCE TYPE = VOLUME :
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000960 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000961 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000962 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000963 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000964 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000965 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000966 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000967 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000968 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000969 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000970 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000971 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000972 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000973 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000974 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000975 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000976 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000977 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000978 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000979 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000980 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000981 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000982 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000983 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000984 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000985 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000986 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000987 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000988 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000989 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
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**MODELOPTs: RegDFault CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000990 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000991 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000992 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000993 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000994 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000995 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
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*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0000996 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000997 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000998 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0000999 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0001000 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0001001 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = I0001002 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0001003 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0001004 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0001005 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0001006 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = I0001007 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = L0001008 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0001009 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0001010 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0001011 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0001012 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0001013 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
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**MODELOPTs: RegDFAULT CONC ELEV

SCALARS WHICH VARY MONTHLY * * SOURCE EMISSION RATE

JANUARY FEBRUARY MARCH APRIL MAY JUNE
AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

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SOURCE ID = L0001014 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0001015 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0001016 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0001017 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0001018 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

SOURCE ID = L0001019 ; SOURCE TYPE = VOLUME ;
0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0.000E+00 0.100E+01 0.000E+00 0.000E+00 0.000E+00 0.000E+00

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
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**MODELOPTs: RegDFault CONC ELEV

*** DISCRETE CARTESIAN

RECEPTORS ***

(X-COORD, Y-COORD,

ZELEV, ZHILL, ZFLAG)

(METERS)

(406368.0, 3774208.0,	99.4,	1877.0,	0.0) ;
(406610.0, 3774353.0,	100.4,	1877.0,	0.0) ;
(406920.0, 3774202.0,	98.7,	1877.0,	0.0) ;
(406754.0, 3773799.0,	98.0,	1877.0,	0.0) ;
(406993.6, 3774221.3,	101.0,	1877.0,	0.0) ;
(407011.8, 3774174.7,	101.8,	1877.0,	0.0) ;
(407029.9, 3774128.1,	103.4,	1877.0,	0.0) ;
(407048.1, 3774081.5,	103.2,	1877.0,	0.0) ;
(407066.3, 3774035.0,	103.7,	1877.0,	0.0) ;
(407084.5, 3773988.4,	104.0,	1877.0,	0.0) ;
(407102.6, 3773941.8,	103.5,	1706.0,	0.0) ;
(407120.8, 3773895.2,	103.0,	1706.0,	0.0) ;
(406946.4, 3774189.1,	99.6,	1877.0,	0.0) ;
(407081.8, 3774111.6,	104.0,	1877.0,	0.0) ;
(407116.7, 3774075.7,	104.0,	1877.0,	0.0) ;
(407151.5, 3774039.8,	104.0,	1877.0,	0.0) ;
(407186.4, 3774004.0,	104.0,	1706.0,	0.0) ;
(407221.2, 3773968.1,	104.5,	1706.0,	0.0) ;
(406921.0, 3774116.9,	99.6,	1877.0,	0.0) ;
(406902.7, 3774072.4,	100.9,	1877.0,	0.0) ;
(406884.3, 3774027.9,	99.5,	1877.0,	0.0) ;
(406865.9, 3773983.4,	100.0,	1877.0,	0.0) ;
(406847.5, 3773938.9,	100.1,	1877.0,	0.0) ;
(406829.1, 3773894.4,	98.7,	1877.0,	0.0) ;
(406810.8, 3773849.9,	98.0,	1877.0,	0.0) ;
(406792.4, 3773805.4,	98.5,	1877.0,	0.0) ;
(406774.0, 3773760.9,	99.3,	1706.0,	0.0) ;
(406967.2, 3774097.8,	101.3,	1877.0,	0.0) ;
(406948.9, 3774053.3,	101.5,	1877.0,	0.0) ;
(406930.5, 3774008.8,	100.8,	1877.0,	0.0) ;
(406912.1, 3773964.3,	100.4,	1877.0,	0.0) ;
(406893.7, 3773919.8,	100.8,	1877.0,	0.0) ;
(406875.3, 3773875.3,	100.2,	1877.0,	0.0) ;
(406857.0, 3773830.8,	99.0,	1877.0,	0.0) ;
(406838.6, 3773786.3,	99.0,	1706.0,	0.0) ;
(406820.2, 3773741.8,	100.2,	1706.0,	0.0) ;
(406995.1, 3774034.2,	103.0,	1877.0,	0.0) ;
(406976.7, 3773989.7,	102.6,	1877.0,	0.0) ;
(406958.3, 3773945.2,	101.0,	1877.0,	0.0) ;
(406939.9, 3773900.7,	100.5,	1877.0,	0.0) ;
(406921.5, 3773856.2,	100.7,	1706.0,	0.0) ;
(406903.2, 3773811.7,	100.0,	1706.0,	0.0) ;
(406884.8, 3773767.2,	100.0,	1706.0,	0.0) ;
(406866.4, 3773722.7,	100.8,	1706.0,	0.0) ;
(407022.9, 3773970.6,	103.0,	1877.0,	0.0) ;
(407004.5, 3773926.1,	101.0,	1877.0,	0.0) ;
(406986.1, 3773881.6,	101.0,	1706.0,	0.0) ;
(406967.8, 3773837.1,	101.0,	1706.0,	0.0) ;

(406949.4, 3773792.6,	100.0,	1706.0,	0.0) ;
(406931.0, 3773748.1,	100.0,	1706.0,	0.0) ;
(406912.6, 3773703.6,	100.4,	1706.0,	0.0) ;
(407142.6, 3774129.5,	104.0,	1877.0,	0.0) ;
(407050.7, 3773907.0,	103.0,	1706.0,	0.0) ;
(407032.4, 3773862.5,	102.4,	1706.0,	0.0) ;
(407014.0, 3773818.0,	100.9,	1706.0,	0.0) ;
(406995.6, 3773773.5,	100.0,	1706.0,	0.0) ;
(406977.2, 3773729.0,	100.1,	1706.0,	0.0) ;
(406958.8, 3773684.5,	100.1,	1706.0,	0.0) ;
(407188.9, 3774110.5,	104.0,	1877.0,	0.0) ;
(407133.7, 3773977.0,	104.0,	1706.0,	0.0) ;
(407078.6, 3773843.5,	103.8,	1706.0,	0.0) ;
(407060.2, 3773799.0,	101.1,	1706.0,	0.0) ;
(407041.8, 3773754.5,	100.5,	1706.0,	0.0) ;
(407023.4, 3773710.0,	100.1,	1706.0,	0.0) ;
(407005.0, 3773665.5,	100.7,	1706.0,	0.0) ;
(407235.1, 3774091.4,	104.0,	1877.0,	0.0) ;
(407216.7, 3774046.9,	104.0,	1706.0,	0.0) ;
(407124.8, 3773824.4,	102.6,	1706.0,	0.0) ;
(407106.4, 3773779.9,	101.1,	1706.0,	0.0) ;
(407088.0, 3773735.4,	101.0,	1706.0,	0.0) ;
(407069.6, 3773690.9,	100.7,	1706.0,	0.0) ;
(407051.3, 3773646.4,	100.3,	1706.0,	0.0) ;
(407281.3, 3774072.3,	104.0,	1706.0,	0.0) ;
(407262.9, 3774027.8,	104.0,	1706.0,	0.0) ;
(407207.8, 3773894.3,	104.0,	1706.0,	0.0) ;
(407189.4, 3773849.8,	103.3,	1706.0,	0.0) ;
(407171.0, 3773805.3,	103.0,	1706.0,	0.0) ;
(407152.6, 3773760.8,	101.7,	1706.0,	0.0) ;
(407134.2, 3773716.3,	101.0,	1706.0,	0.0) ;
(407115.8, 3773671.8,	101.0,	1706.0,	0.0) ;
(407097.5, 3773627.3,	101.0,	1706.0,	0.0) ;
(406716.2, 3773731.3,	99.0,	1706.0,	0.0) ;
(406738.9, 3773686.8,	100.6,	1706.0,	0.0) ;
(406661.1, 3773693.1,	100.9,	1706.0,	0.0) ;
(406727.4, 3773638.2,	101.0,	1706.0,	0.0) ;
(406819.5, 3773671.9,	101.2,	1706.0,	0.0) ;
(406649.5, 3773644.4,	101.5,	1706.0,	0.0) ;
(406715.8, 3773589.5,	101.0,	1706.0,	0.0) ;
(406784.5, 3773597.8,	101.2,	1706.0,	0.0) ;
(406842.3, 3773627.3,	102.0,	1706.0,	0.0) ;

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**MODELOPTs: RegDFault CONC ELEV

*** DISCRETE CARTESIAN

RECEPTORS ***

(X-COORD, Y-COORD,

ZELEV, ZHILL, ZFLAG)

(METERS)

(406637.9, 3773595.8,	101.0,	1706.0,	0.0) ;
(406712.8, 3773541.9,	101.0,	1706.0,	0.0) ;
(406798.6, 3773552.2,	101.6,	1706.0,	0.0) ;
(406870.9, 3773589.2,	102.0,	1706.0,	0.0) ;
(406626.3, 3773547.2,	101.0,	1706.0,	0.0) ;
(406699.5, 3773493.1,	101.0,	1706.0,	0.0) ;
(406781.9, 3773503.0,	101.1,	1706.0,	0.0) ;
(406892.5, 3773543.4,	102.0,	1706.0,	0.0) ;
(406948.8, 3773604.4,	101.7,	1706.0,	0.0) ;
(406614.7, 3773498.5,	101.0,	1706.0,	0.0) ;
(406686.7, 3773444.3,	101.0,	1706.0,	0.0) ;
(406766.9, 3773453.9,	101.0,	1706.0,	0.0) ;
(406847.0, 3773463.5,	102.0,	1706.0,	0.0) ;
(406914.5, 3773498.0,	102.0,	1706.0,	0.0) ;
(406969.2, 3773557.4,	102.0,	1706.0,	0.0) ;
(406603.1, 3773449.9,	101.0,	1706.0,	0.0) ;
(406674.3, 3773395.6,	101.0,	1706.0,	0.0) ;
(406752.8, 3773405.0,	101.0,	1706.0,	0.0) ;
(406831.3, 3773414.4,	101.7,	1706.0,	0.0) ;
(406936.7, 3773452.9,	102.0,	1706.0,	0.0) ;
(406990.3, 3773511.0,	102.0,	1706.0,	0.0) ;
(407043.9, 3773569.1,	101.9,	1706.0,	0.0) ;
(406591.5, 3773401.2,	100.9,	1706.0,	0.0) ;
(406660.3, 3773746.5,	98.0,	1877.0,	0.0) ;
(406589.5, 3773785.1,	101.0,	1877.0,	0.0) ;
(406600.9, 3773721.9,	109.1,	1706.0,	0.0) ;
(406577.0, 3773678.0,	102.3,	1706.0,	0.0) ;
(406588.4, 3773614.8,	98.0,	1706.0,	0.0) ;
(406517.6, 3773653.4,	98.1,	1877.0,	0.0) ;
(406564.5, 3773570.9,	98.4,	1706.0,	0.0) ;
(406493.7, 3773609.6,	90.7,	1877.0,	0.0) ;
(406540.5, 3773527.0,	99.7,	1706.0,	0.0) ;
(406469.7, 3773565.7,	85.7,	1877.0,	0.0) ;
(406545.4, 3773472.0,	101.0,	1706.0,	0.0) ;
(406481.2, 3773502.5,	98.5,	1706.0,	0.0) ;
(406525.6, 3773426.6,	100.2,	1706.0,	0.0) ;
(406457.2, 3773458.6,	98.7,	1706.0,	0.0) ;
(406556.7, 3773826.0,	99.5,	1877.0,	0.0) ;
(406546.8, 3773759.1,	103.4,	1877.0,	0.0) ;
(406514.0, 3773800.1,	101.9,	1877.0,	0.0) ;
(406504.0, 3773733.1,	100.8,	1877.0,	0.0) ;
(406471.3, 3773774.1,	101.3,	1877.0,	0.0) ;
(406461.3, 3773707.2,	96.2,	1877.0,	0.0) ;
(406428.5, 3773748.1,	96.7,	1877.0,	0.0) ;
(406437.4, 3773663.3,	90.1,	1877.0,	0.0) ;
(406375.9, 3773655.2,	84.6,	1877.0,	0.0) ;
(406413.4, 3773619.4,	84.2,	1877.0,	0.0) ;
(406333.2, 3773629.2,	83.3,	1877.0,	0.0) ;

(406370.7, 3773593.4,	84.7,	1877.0,	0.0) ;
(406408.2, 3773557.6,	82.3,	1877.0,	0.0) ;
(406290.5, 3773603.2,	80.8,	1877.0,	0.0) ;
(406328.0, 3773567.4,	81.0,	1877.0,	0.0) ;
(406365.5, 3773531.6,	81.1,	1877.0,	0.0) ;
(406403.0, 3773495.8,	84.3,	1877.0,	0.0) ;
(406257.7, 3773644.1,	80.8,	1877.0,	0.0) ;
(406480.1, 3773833.2,	103.1,	1877.0,	0.0) ;
(406772.1, 3773653.3,	101.0,	1706.0,	0.0) ;
(406520.9, 3773866.7,	98.6,	1877.0,	0.0) ;
(406578.3, 3773874.2,	96.5,	1877.0,	0.0) ;
(406610.8, 3773829.2,	97.8,	1877.0,	0.0) ;
(406190.7, 3773616.3,	81.8,	1877.0,	0.0) ;
(406143.5, 3773616.2,	83.7,	1877.0,	0.0) ;
(406096.3, 3773616.2,	84.5,	1877.0,	0.0) ;
(406238.0, 3773566.4,	81.0,	1877.0,	0.0) ;
(406190.8, 3773566.3,	81.6,	1877.0,	0.0) ;
(406143.6, 3773566.2,	83.2,	1877.0,	0.0) ;
(406096.4, 3773566.2,	83.2,	1877.0,	0.0) ;
(406285.3, 3773516.4,	80.0,	1877.0,	0.0) ;
(406238.1, 3773516.4,	80.0,	1877.0,	0.0) ;
(406190.9, 3773516.3,	80.9,	1877.0,	0.0) ;
(406143.7, 3773516.2,	81.5,	1877.0,	0.0) ;
(406096.5, 3773516.2,	82.2,	1877.0,	0.0) ;
(406332.6, 3773466.5,	81.9,	1877.0,	0.0) ;
(406285.4, 3773466.4,	80.7,	1877.0,	0.0) ;
(406238.1, 3773466.4,	80.3,	1877.0,	0.0) ;
(406191.0, 3773466.3,	80.7,	1877.0,	0.0) ;
(406143.7, 3773466.2,	81.0,	1877.0,	0.0) ;
(406096.5, 3773466.2,	81.5,	1877.0,	0.0) ;
(406474.3, 3773416.7,	98.8,	1706.0,	0.0) ;
(406427.0, 3773416.6,	98.7,	1706.0,	0.0) ;
(406379.8, 3773416.6,	100.4,	1706.0,	0.0) ;
(406332.6, 3773416.5,	98.1,	1706.0,	0.0) ;
(406285.4, 3773416.4,	86.8,	1877.0,	0.0) ;
(406238.2, 3773416.4,	82.0,	1877.0,	0.0) ;
(406191.0, 3773416.3,	81.9,	1877.0,	0.0) ;
(406143.8, 3773416.2,	80.5,	1877.0,	0.0) ;
(406096.6, 3773416.2,	80.4,	1877.0,	0.0) ;
(406474.3, 3773366.7,	100.0,	1706.0,	0.0) ;
(406427.1, 3773366.6,	100.0,	1706.0,	0.0) ;
(406379.9, 3773366.6,	100.7,	1706.0,	0.0) ;

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**MODELOPTs: RegDFault CONC ELEV

*** DISCRETE CARTESIAN

RECEPTORS ***

(X-COORD, Y-COORD,

ZELEV, ZHILL, ZFLAG)

(METERS)

(406332.7, 3773366.5,	98.8,	1706.0,	0.0) ;
(406285.5, 3773366.4,	97.8,	1706.0,	0.0) ;
(406238.3, 3773366.4,	96.0,	1706.0,	0.0) ;
(406191.1, 3773366.3,	96.6,	1706.0,	0.0) ;
(406143.9, 3773366.2,	96.7,	1706.0,	0.0) ;
(406096.7, 3773366.2,	96.2,	1706.0,	0.0) ;
(406512.3, 3773338.6,	100.0,	1706.0,	0.0) ;
(406776.9, 3773711.1,	100.2,	1706.0,	0.0) ;
(406427.2, 3773316.6,	100.5,	1706.0,	0.0) ;
(406380.0, 3773316.6,	100.0,	1706.0,	0.0) ;
(406332.8, 3773316.5,	99.4,	1706.0,	0.0) ;
(406285.6, 3773316.4,	98.7,	1706.0,	0.0) ;
(406238.4, 3773316.4,	98.0,	1706.0,	0.0) ;
(406191.2, 3773316.3,	98.0,	1706.0,	0.0) ;
(406144.0, 3773316.2,	98.0,	1706.0,	0.0) ;
(406096.8, 3773316.2,	98.0,	1706.0,	0.0) ;
(406512.9, 3773289.0,	100.9,	1706.0,	0.0) ;
(406589.9, 3773333.6,	100.2,	1706.0,	0.0) ;
(406427.3, 3773266.6,	100.3,	1706.0,	0.0) ;
(406380.1, 3773266.6,	100.0,	1706.0,	0.0) ;
(406332.8, 3773266.5,	100.0,	1706.0,	0.0) ;
(406285.6, 3773266.4,	99.0,	1706.0,	0.0) ;
(406238.4, 3773266.4,	99.0,	1706.0,	0.0) ;
(406191.2, 3773266.3,	98.4,	1706.0,	0.0) ;
(406144.0, 3773266.2,	98.0,	1706.0,	0.0) ;
(406096.8, 3773266.2,	98.0,	1706.0,	0.0) ;
(406046.2, 3773666.1,	90.0,	1877.0,	0.0) ;
(406046.2, 3773714.9,	97.2,	1877.0,	0.0) ;
(406046.1, 3773763.7,	98.0,	1877.0,	0.0) ;
(406011.0, 3773630.7,	86.9,	1877.0,	0.0) ;
(405996.2, 3773714.8,	96.1,	1877.0,	0.0) ;
(405996.1, 3773763.6,	98.0,	1877.0,	0.0) ;
(405961.0, 3773630.6,	90.9,	1877.0,	0.0) ;
(406025.7, 3773545.4,	84.1,	1877.0,	0.0) ;
(405946.2, 3773714.8,	97.2,	1877.0,	0.0) ;
(405946.1, 3773763.6,	98.0,	1877.0,	0.0) ;
(405911.0, 3773630.5,	92.3,	1877.0,	0.0) ;
(405940.3, 3773559.9,	81.1,	1877.0,	0.0) ;
(405990.4, 3773509.9,	83.2,	1877.0,	0.0) ;
(405896.2, 3773714.7,	96.5,	1877.0,	0.0) ;
(405896.1, 3773763.5,	98.0,	1877.0,	0.0) ;
(405864.6, 3773621.6,	93.2,	1877.0,	0.0) ;
(405883.0, 3773577.5,	89.3,	1877.0,	0.0) ;
(405901.4, 3773533.3,	81.6,	1877.0,	0.0) ;
(405964.0, 3773470.9,	84.5,	1877.0,	0.0) ;
(406008.2, 3773452.7,	84.5,	1877.0,	0.0) ;
(406052.4, 3773434.4,	82.6,	1877.0,	0.0) ;
(405846.2, 3773665.8,	95.4,	1877.0,	0.0) ;

(405846.2, 3773714.6,	96.9,	1877.0,	0.0) ;
(405846.1, 3773763.4,	97.6,	1877.0,	0.0) ;
(405813.9, 3773623.3,	94.9,	1877.0,	0.0) ;
(405831.5, 3773580.9,	92.9,	1877.0,	0.0) ;
(405849.1, 3773538.5,	92.0,	1877.0,	0.0) ;
(405866.8, 3773496.1,	90.1,	1877.0,	0.0) ;
(405926.9, 3773436.2,	88.4,	1877.0,	0.0) ;
(405969.3, 3773418.7,	83.2,	1877.0,	0.0) ;
(406011.8, 3773401.2,	86.1,	1877.0,	0.0) ;
(406054.2, 3773383.7,	88.5,	1877.0,	0.0) ;
(405796.2, 3773665.7,	96.1,	1877.0,	0.0) ;
(405796.2, 3773714.5,	97.0,	1877.0,	0.0) ;
(405796.1, 3773763.4,	97.6,	1877.0,	0.0) ;
(405763.4, 3773624.4,	95.0,	1877.0,	0.0) ;
(405797.7, 3773542.0,	93.7,	1877.0,	0.0) ;
(405832.0, 3773459.5,	93.1,	1877.0,	0.0) ;
(405890.4, 3773401.3,	93.6,	1877.0,	0.0) ;
(405972.9, 3773367.2,	94.2,	1877.0,	0.0) ;
(405746.2, 3773714.5,	97.0,	1877.0,	0.0) ;
(405746.1, 3773763.3,	97.8,	1877.0,	0.0) ;
(405713.0, 3773625.2,	96.0,	1877.0,	0.0) ;
(405746.6, 3773544.4,	95.0,	1877.0,	0.0) ;
(405780.2, 3773463.7,	94.0,	1877.0,	0.0) ;
(405854.2, 3773366.2,	97.0,	1877.0,	0.0) ;
(405935.1, 3773332.9,	97.0,	1706.0,	0.0) ;
(406016.0, 3773299.5,	97.1,	1706.0,	0.0) ;
(405696.1, 3773763.2,	97.1,	1877.0,	0.0) ;
(406092.2, 3773826.2,	98.0,	1877.0,	0.0) ;
(406019.5, 3773814.5,	98.2,	1877.0,	0.0) ;
(406059.7, 3773864.2,	99.0,	1877.0,	0.0) ;
(405985.6, 3773849.3,	98.2,	1877.0,	0.0) ;
(406027.3, 3773902.2,	99.2,	1877.0,	0.0) ;
(405952.3, 3773885.5,	98.6,	1877.0,	0.0) ;
(405924.2, 3773824.5,	98.0,	1877.0,	0.0) ;
(405994.8, 3773940.3,	99.5,	1877.0,	0.0) ;
(405919.2, 3773922.2,	99.0,	1877.0,	0.0) ;
(405890.0, 3773858.7,	98.0,	1877.0,	0.0) ;
(405962.4, 3773978.3,	100.0,	1877.0,	0.0) ;
(405886.4, 3773959.4,	100.0,	1877.0,	0.0) ;
(405856.3, 3773894.0,	99.0,	1877.0,	0.0) ;
(405826.2, 3773828.7,	98.0,	1877.0,	0.0) ;

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**MODELOPTs: RegDFault CONC ELEV

RECEPTORS ***
ZELEV, ZHILL, ZFLAG)

*** DISCRETE CARTESIAN
(X-COORD, Y-COORD, (METERS)

(405930.0, 3774016.4, 100.0, 1877.0, 0.0) ;
(405853.6, 3773996.7, 100.0, 1877.0, 0.0) ;
(405822.9, 3773930.0, 99.1, 1877.0, 0.0) ;
(405792.2, 3773863.3, 98.9, 1877.0, 0.0) ;
(405897.5, 3774054.4, 101.0, 1877.0, 0.0) ;
(405820.9, 3774034.2, 100.6, 1877.0, 0.0) ;
(405789.7, 3773966.5, 100.0, 1877.0, 0.0) ;
(405758.5, 3773898.7, 99.0, 1877.0, 0.0) ;
(405727.3, 3773831.0, 98.8, 1877.0, 0.0) ;
(405865.1, 3774092.5, 101.0, 1877.0, 0.0) ;
(406145.8, 3773877.0, 99.3, 1877.0, 0.0) ;
(406109.8, 3773911.6, 100.5, 1877.0, 0.0) ;
(406073.7, 3773946.3, 100.2, 1877.0, 0.0) ;
(406037.6, 3773980.9, 100.0, 1877.0, 0.0) ;
(406001.6, 3774015.5, 100.0, 1877.0, 0.0) ;
(405965.5, 3774050.2, 101.0, 1877.0, 0.0) ;
(405958.1, 3774114.7, 101.0, 1877.0, 0.0) ;
(405922.1, 3774149.3, 101.0, 1877.0, 0.0) ;
(406200.2, 3773938.6, 99.3, 1877.0, 0.0) ;
(406161.5, 3773970.2, 100.6, 1877.0, 0.0) ;
(406122.7, 3774001.8, 100.5, 1877.0, 0.0) ;
(406084.0, 3774033.4, 100.5, 1877.0, 0.0) ;
(406045.2, 3774065.0, 100.7, 1877.0, 0.0) ;
(406006.5, 3774096.6, 101.0, 1877.0, 0.0) ;
(405996.1, 3774163.0, 101.0, 1877.0, 0.0) ;
(405957.3, 3774194.6, 101.0, 1877.0, 0.0) ;
(406242.1, 3773996.0, 99.3, 1877.0, 0.0) ;
(406199.6, 3774022.4, 101.0, 1877.0, 0.0) ;
(406157.1, 3774048.7, 101.0, 1877.0, 0.0) ;
(406114.6, 3774075.0, 100.0, 1877.0, 0.0) ;
(406072.1, 3774101.4, 100.0, 1877.0, 0.0) ;
(406046.9, 3774155.7, 101.0, 1877.0, 0.0) ;
(406265.6, 3774061.8, 100.6, 1877.0, 0.0) ;
(406216.9, 3774073.2, 101.0, 1877.0, 0.0) ;
(406251.8, 3774115.0, 100.6, 1877.0, 0.0) ;
(406191.9, 3774133.7, 100.0, 1877.0, 0.0) ;
(406144.9, 3774116.8, 100.0, 1877.0, 0.0) ;
(406263.4, 3774212.2, 98.1, 1877.0, 0.0) ;
(406217.0, 3774230.7, 98.7, 1877.0, 0.0) ;
(406275.9, 3774274.6, 98.0, 1877.0, 0.0) ;
(406194.4, 3774275.3, 99.3, 1877.0, 0.0) ;
(406146.0, 3774187.6, 100.0, 1877.0, 0.0) ;
(406253.3, 3774319.2, 98.0, 1877.0, 0.0) ;
(406171.8, 3774319.9, 100.0, 1877.0, 0.0) ;
(406124.0, 3774267.6, 100.8, 1877.0, 0.0) ;
(406099.6, 3774206.1, 100.8, 1877.0, 0.0) ;
(406230.7, 3774363.8, 98.3, 1877.0, 0.0) ;
(406149.2, 3774364.5, 100.6, 1877.0, 0.0) ;

(406101.4, 3774312.2, 101.0, 1877.0, 0.0) ;
(406053.1, 3774224.5, 101.0, 1877.0, 0.0) ;
(406208.1, 3774408.4, 100.0, 1877.0, 0.0) ;
(406126.6, 3774409.1, 101.1, 1877.0, 0.0) ;
(406078.8, 3774356.8, 101.3, 1877.0, 0.0) ;
(406031.1, 3774304.6, 101.6, 1877.0, 0.0) ;
(406006.6, 3774243.0, 101.0, 1877.0, 0.0) ;
(406185.5, 3774453.0, 100.9, 1877.0, 0.0) ;
(406056.3, 3774401.4, 102.0, 1877.0, 0.0) ;
(406104.0, 3774453.7, 102.0, 1877.0, 0.0) ;
(406008.5, 3774349.2, 102.0, 1877.0, 0.0) ;
(405960.2, 3774261.5, 102.0, 1877.0, 0.0) ;
(406163.0, 3774497.6, 102.0, 1877.0, 0.0) ;
(406081.4, 3774498.3, 102.0, 1877.0, 0.0) ;
(406033.7, 3774446.1, 102.0, 1877.0, 0.0) ;
(405985.9, 3774393.8, 102.0, 1877.0, 0.0) ;
(405938.2, 3774341.5, 102.0, 1877.0, 0.0) ;
(405913.7, 3774279.9, 102.0, 1877.0, 0.0) ;
(405912.5, 3774209.1, 101.4, 1877.0, 0.0) ;
(405910.8, 3774102.9, 101.0, 1877.0, 0.0) ;
(406140.4, 3774542.2, 102.5, 1877.0, 0.0) ;
(406303.8, 3774232.3, 98.0, 1877.0, 0.0) ;
(406367.6, 3774255.8, 100.3, 1877.0, 0.0) ;
(406318.4, 3774290.9, 98.0, 1877.0, 0.0) ;
(406301.1, 3774337.9, 97.7, 1877.0, 0.0) ;
(406283.8, 3774384.8, 98.0, 1877.0, 0.0) ;
(406266.6, 3774431.7, 99.7, 1877.0, 0.0) ;
(406249.3, 3774478.6, 101.4, 1877.0, 0.0) ;
(406232.0, 3774525.5, 103.0, 1877.0, 0.0) ;
(406182.8, 3774560.7, 103.0, 1877.0, 0.0) ;
(406246.6, 3774584.2, 103.9, 1877.0, 0.0) ;
(406441.1, 3774285.2, 101.0, 1877.0, 0.0) ;
(406385.1, 3774316.6, 99.9, 1877.0, 0.0) ;
(406366.6, 3774363.1, 98.5, 1877.0, 0.0) ;
(406348.0, 3774409.5, 98.8, 1877.0, 0.0) ;
(406329.5, 3774455.9, 100.6, 1877.0, 0.0) ;
(406310.9, 3774502.4, 102.1, 1877.0, 0.0) ;
(406292.3, 3774548.8, 103.0, 1877.0, 0.0) ;
(406311.2, 3774610.2, 103.8, 1877.0, 0.0) ;
(406513.5, 3774308.6, 100.7, 1877.0, 0.0) ;
(406429.0, 3774333.9, 100.6, 1877.0, 0.0) ;
(406498.2, 3774356.2, 101.0, 1877.0, 0.0) ;

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**MODELOPTs: RegDFault CONC ELEV

RECEPTORS ***
ZELEV, ZHILL, ZFLAG)

*** DISCRETE CARTESIAN
(X-COORD, Y-COORD, (METERS)

(406413.6, 3774381.5, 100.1, 1877.0, 0.0) ;
(406482.8, 3774403.8, 101.0, 1877.0, 0.0) ;
(406398.3, 3774429.1, 100.8, 1877.0, 0.0) ;
(406467.5, 3774451.4, 101.5, 1877.0, 0.0) ;
(406382.9, 3774476.7, 101.3, 1877.0, 0.0) ;
(406452.1, 3774499.0, 102.0, 1877.0, 0.0) ;
(406367.6, 3774524.3, 102.0, 1877.0, 0.0) ;
(406436.8, 3774546.6, 102.7, 1877.0, 0.0) ;
(406352.2, 3774571.9, 103.0, 1877.0, 0.0) ;
(406421.5, 3774594.2, 103.0, 1877.0, 0.0) ;
(406371.5, 3774630.6, 104.0, 1877.0, 0.0) ;
(406550.6, 3774353.6, 101.0, 1877.0, 0.0) ;
(406607.7, 3774410.8, 101.0, 1877.0, 0.0) ;
(406543.7, 3774417.5, 101.0, 1877.0, 0.0) ;
(406600.9, 3774474.8, 102.0, 1877.0, 0.0) ;
(406536.9, 3774481.5, 102.0, 1877.0, 0.0) ;
(406501.5, 3774516.8, 102.0, 1877.0, 0.0) ;
(406494.7, 3774580.7, 103.0, 1877.0, 0.0) ;
(406423.9, 3774651.4, 104.0, 1877.0, 0.0) ;
(406388.5, 3774686.7, 104.0, 1877.0, 0.0) ;
(406672.1, 3774454.1, 101.0, 1877.0, 0.0) ;
(406718.4, 3774453.8, 101.0, 1877.0, 0.0) ;
(406764.7, 3774453.3, 101.0, 1877.0, 0.0) ;
(406811.0, 3774452.9, 101.6, 1877.0, 0.0) ;
(406857.2, 3774452.5, 103.4, 1877.0, 0.0) ;
(406903.5, 3774452.1, 104.0, 1877.0, 0.0) ;
(406949.8, 3774451.8, 104.0, 1877.0, 0.0) ;
(406996.1, 3774451.3, 104.0, 1877.0, 0.0) ;
(407042.4, 3774450.9, 104.0, 1877.0, 0.0) ;
(407088.7, 3774450.5, 104.0, 1877.0, 0.0) ;
(406672.5, 3774504.1, 102.0, 1877.0, 0.0) ;
(406718.8, 3774503.8, 102.0, 1877.0, 0.0) ;
(406765.1, 3774503.3, 102.0, 1877.0, 0.0) ;
(406811.4, 3774502.9, 102.3, 1877.0, 0.0) ;
(406857.7, 3774502.5, 103.9, 1877.0, 0.0) ;
(406904.0, 3774502.1, 104.0, 1877.0, 0.0) ;
(406950.3, 3774501.8, 104.0, 1877.0, 0.0) ;
(406996.6, 3774501.3, 104.0, 1877.0, 0.0) ;
(407042.9, 3774500.9, 104.0, 1877.0, 0.0) ;
(407089.1, 3774500.5, 104.0, 1877.0, 0.0) ;
(406637.1, 3774539.5, 102.0, 1877.0, 0.0) ;
(406719.2, 3774553.7, 102.0, 1877.0, 0.0) ;
(406765.5, 3774553.3, 102.5, 1877.0, 0.0) ;
(406811.8, 3774552.9, 103.0, 1877.0, 0.0) ;
(406858.1, 3774552.5, 103.6, 1877.0, 0.0) ;
(406904.4, 3774552.1, 104.0, 1877.0, 0.0) ;
(406950.7, 3774551.7, 104.0, 1877.0, 0.0) ;
(406997.0, 3774551.3, 104.0, 1877.0, 0.0) ;

(407043.3, 3774550.9, 104.0, 1877.0, 0.0) ;
(407089.6, 3774550.5, 104.0, 1877.0, 0.0) ;
(406637.5, 3774589.5, 103.0, 1877.0, 0.0) ;
(406565.9, 3774560.1, 102.2, 1877.0, 0.0) ;
(406719.7, 3774603.7, 103.0, 1877.0, 0.0) ;
(406766.0, 3774603.3, 103.0, 1877.0, 0.0) ;
(406812.2, 3774602.9, 103.1, 1877.0, 0.0) ;
(406858.5, 3774602.5, 103.8, 1877.0, 0.0) ;
(406951.1, 3774601.7, 104.4, 1877.0, 0.0) ;
(406904.8, 3774602.1, 104.0, 1877.0, 0.0) ;
(406997.4, 3774601.3, 105.0, 1877.0, 0.0) ;
(407043.7, 3774600.9, 105.0, 1877.0, 0.0) ;
(407090.0, 3774600.5, 104.8, 1877.0, 0.0) ;
(406638.0, 3774639.5, 103.0, 1877.0, 0.0) ;
(406566.3, 3774610.1, 103.0, 1877.0, 0.0) ;
(406720.1, 3774653.7, 103.0, 1877.0, 0.0) ;
(406766.4, 3774653.3, 103.0, 1877.0, 0.0) ;
(406812.7, 3774652.9, 103.3, 1877.0, 0.0) ;
(406859.0, 3774652.5, 104.0, 1877.0, 0.0) ;
(406905.3, 3774652.1, 104.0, 1877.0, 0.0) ;
(406951.6, 3774651.7, 104.8, 1877.0, 0.0) ;
(406997.9, 3774651.3, 105.0, 1877.0, 0.0) ;
(407044.2, 3774650.9, 105.0, 1877.0, 0.0) ;
(407090.5, 3774650.5, 105.0, 1877.0, 0.0) ;
(406638.4, 3774689.5, 103.8, 1877.0, 0.0) ;
(406566.8, 3774660.1, 103.5, 1877.0, 0.0) ;
(406495.1, 3774630.7, 103.5, 1877.0, 0.0) ;
(406720.5, 3774703.7, 103.9, 1877.0, 0.0) ;
(406766.8, 3774703.3, 103.9, 1877.0, 0.0) ;
(406813.1, 3774702.9, 104.0, 1877.0, 0.0) ;
(406859.4, 3774702.5, 104.0, 1877.0, 0.0) ;
(406905.7, 3774702.1, 104.9, 1877.0, 0.0) ;
(406952.0, 3774701.7, 105.0, 1877.0, 0.0) ;
(406998.3, 3774701.3, 105.0, 1877.0, 0.0) ;
(407044.6, 3774700.9, 105.0, 1877.0, 0.0) ;
(407090.9, 3774700.5, 105.0, 1877.0, 0.0) ;
(406632.9, 3774737.0, 104.0, 1877.0, 0.0) ;
(406591.1, 3774719.9, 104.0, 1877.0, 0.0) ;
(406549.3, 3774702.8, 104.0, 1877.0, 0.0) ;
(406507.5, 3774685.6, 104.0, 1877.0, 0.0) ;
(406465.7, 3774668.5, 104.0, 1877.0, 0.0) ;
(406674.7, 3774754.1, 104.0, 1877.0, 0.0) ;

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**MODELOPTs:	RegDFault	Conc	Elev
*** DISCRETE CARTESIAN			
(X-COORD, Y-COORD,			
(METERS)			
RECEPTORS ***			
ZELEV, ZHILL, ZFLAG)			
(406721.0, 3774753.7,	104.0,	1877.0,	0.0) ;
(406767.2, 3774753.3,	104.0,	1877.0,	0.0) ;
(406813.5, 3774752.9,	104.5,	1877.0,	0.0) ;
(406859.8, 3774752.5,	104.9,	1877.0,	0.0) ;
(406906.1, 3774752.1,	105.0,	1877.0,	0.0) ;
(406952.4, 3774751.7,	105.0,	1877.0,	0.0) ;
(406998.7, 3774751.3,	105.2,	1877.0,	0.0) ;
(407045.0, 3774750.9,	105.5,	1877.0,	0.0) ;
(407091.3, 3774750.5,	106.0,	1877.0,	0.0) ;
(406634.1, 3774787.4,	104.7,	1877.0,	0.0) ;
(406552.3, 3774753.8,	104.6,	1877.0,	0.0) ;
(406470.4, 3774720.2,	104.0,	1877.0,	0.0) ;
(406721.4, 3774803.7,	105.0,	1877.0,	0.0) ;
(406767.7, 3774803.3,	105.0,	1877.0,	0.0) ;
(406814.0, 3774802.9,	105.0,	1877.0,	0.0) ;
(406860.3, 3774802.5,	105.2,	1877.0,	0.0) ;
(406906.6, 3774802.1,	105.4,	1877.0,	0.0) ;
(406952.9, 3774801.7,	106.0,	1877.0,	0.0) ;
(406999.2, 3774801.3,	106.0,	1877.0,	0.0) ;
(407045.5, 3774800.9,	106.0,	1877.0,	0.0) ;
(407091.8, 3774800.5,	106.1,	1877.0,	0.0) ;
(407134.6, 3774381.7,	103.2,	1877.0,	0.0) ;
(407115.8, 3774335.5,	103.7,	1877.0,	0.0) ;
(407097.0, 3774289.4,	103.5,	1877.0,	0.0) ;
(407078.2, 3774243.3,	103.6,	1877.0,	0.0) ;
(407176.2, 3774409.4,	104.0,	1877.0,	0.0) ;
(407130.3, 3774478.3,	104.0,	1877.0,	0.0) ;
(407180.9, 3774362.8,	104.0,	1877.0,	0.0) ;
(407162.1, 3774316.7,	104.0,	1877.0,	0.0) ;
(407143.3, 3774270.5,	103.9,	1877.0,	0.0) ;
(407124.5, 3774224.4,	103.5,	1877.0,	0.0) ;
(407222.5, 3774390.5,	103.6,	1877.0,	0.0) ;
(407217.8, 3774437.1,	105.2,	1877.0,	0.0) ;
(407172.0, 3774506.0,	104.0,	1877.0,	0.0) ;
(407130.8, 3774528.3,	104.0,	1877.0,	0.0) ;
(407227.2, 3774343.9,	102.1,	1877.0,	0.0) ;
(407208.4, 3774297.8,	100.9,	1877.0,	0.0) ;
(407189.6, 3774251.7,	101.8,	1877.0,	0.0) ;
(407170.8, 3774205.5,	104.0,	1877.0,	0.0) ;
(407268.8, 3774371.6,	104.3,	1877.0,	0.0) ;
(407264.1, 3774418.2,	101.4,	1877.0,	0.0) ;
(407259.4, 3774464.8,	97.2,	1877.0,	0.0) ;
(407213.6, 3774533.7,	104.0,	1877.0,	0.0) ;
(407172.4, 3774556.0,	104.0,	1877.0,	0.0) ;
(407131.2, 3774578.3,	104.0,	1877.0,	0.0) ;
(407273.5, 3774325.0,	90.6,	1877.0,	0.0) ;
(407254.7, 3774278.9,	73.1,	1877.0,	0.0) ;
(407235.9, 3774232.8,	93.3,	1877.0,	0.0) ;

(407217.0, 3774186.7,	103.2,	1877.0,	0.0) ;
(407315.1, 3774352.7,	101.4,	1877.0,	0.0) ;
(407310.4, 3774399.3,	87.0,	1877.0,	0.0) ;
(407305.7, 3774445.9,	98.8,	1877.0,	0.0) ;
(407301.1, 3774492.5,	104.2,	1877.0,	0.0) ;
(407255.2, 3774561.4,	104.7,	1877.0,	0.0) ;
(407214.0, 3774583.7,	104.0,	1877.0,	0.0) ;
(407172.8, 3774606.0,	104.0,	1877.0,	0.0) ;
(407131.6, 3774628.3,	104.5,	1877.0,	0.0) ;
(407319.8, 3774306.1,	75.3,	1877.0,	0.0) ;
(407301.0, 3774260.0,	72.7,	1877.0,	0.0) ;
(407282.2, 3774213.9,	88.4,	1877.0,	0.0) ;
(407263.3, 3774167.8,	103.8,	1877.0,	0.0) ;
(407361.4, 3774333.9,	94.4,	1877.0,	0.0) ;
(407356.7, 3774380.4,	75.3,	1877.0,	0.0) ;
(407352.0, 3774427.0,	74.1,	1877.0,	0.0) ;
(407347.4, 3774473.6,	89.7,	1877.0,	0.0) ;
(407342.7, 3774520.2,	103.7,	1877.0,	0.0) ;
(407296.8, 3774589.1,	106.0,	1877.0,	0.0) ;
(407255.6, 3774611.4,	104.0,	1877.0,	0.0) ;
(407214.4, 3774633.7,	104.0,	1877.0,	0.0) ;
(407173.2, 3774656.0,	104.3,	1877.0,	0.0) ;
(407132.1, 3774678.2,	105.0,	1877.0,	0.0) ;
(407366.1, 3774287.3,	72.2,	1877.0,	0.0) ;
(407347.3, 3774241.1,	70.4,	1877.0,	0.0) ;
(407328.5, 3774195.0,	88.7,	1877.0,	0.0) ;
(407309.6, 3774148.9,	103.3,	1877.0,	0.0) ;
(407407.7, 3774315.0,	82.3,	1877.0,	0.0) ;
(407403.0, 3774361.6,	78.3,	1877.0,	0.0) ;
(407398.3, 3774408.2,	74.7,	1877.0,	0.0) ;
(407393.6, 3774454.8,	75.0,	1877.0,	0.0) ;
(407389.0, 3774501.3,	84.4,	1877.0,	0.0) ;
(407384.3, 3774547.9,	103.9,	1877.0,	0.0) ;
(407338.4, 3774616.8,	107.0,	1877.0,	0.0) ;
(407297.2, 3774639.1,	105.7,	1877.0,	0.0) ;
(407256.1, 3774661.4,	104.0,	1877.0,	0.0) ;
(407214.9, 3774683.7,	104.1,	1877.0,	0.0) ;
(407173.7, 3774706.0,	105.0,	1877.0,	0.0) ;
(407132.5, 3774728.2,	105.7,	1877.0,	0.0) ;
(407412.4, 3774268.4,	72.1,	1877.0,	0.0) ;
(407393.6, 3774222.3,	68.6,	1877.0,	0.0) ;
(407374.8, 3774176.1,	88.0,	1877.0,	0.0) ;

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*** AERMOD - VERSION 14134 *** *** Peck Road Spreading Basin
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**MODELOPTs: RegDFault CONC ELEV

RECEPTORS ***
ZELEV, ZHILL, ZFLAG)

*** DISCRETE CARTESIAN
(X-COORD, Y-COORD,
(METERS)

( 407356.0, 3774130.0, 102.8, 1877.0, 0.0) ;
( 407454.0, 3774296.1, 94.5, 1877.0, 0.0) ;
( 407449.3, 3774342.7, 78.6, 1877.0, 0.0) ;
( 407444.6, 3774389.3, 76.2, 1877.0, 0.0) ;
( 407440.0, 3774435.9, 77.0, 1877.0, 0.0) ;
( 407435.3, 3774482.5, 76.3, 1877.0, 0.0) ;
( 407430.6, 3774529.1, 85.1, 1877.0, 0.0) ;
( 407425.9, 3774575.7, 104.9, 1877.0, 0.0) ;
( 407380.0, 3774644.5, 107.9, 1877.0, 0.0) ;
( 407338.9, 3774666.8, 107.0, 1877.0, 0.0) ;
( 407297.7, 3774689.1, 104.6, 1877.0, 0.0) ;
( 407256.5, 3774711.4, 104.0, 1877.0, 0.0) ;
( 407215.3, 3774733.7, 105.4, 1877.0, 0.0) ;
( 407174.1, 3774756.0, 106.0, 1877.0, 0.0) ;
( 407132.9, 3774778.2, 106.0, 1877.0, 0.0) ;
( 407458.7, 3774249.5, 70.1, 1877.0, 0.0) ;
( 407439.9, 3774203.4, 71.3, 1877.0, 0.0) ;
( 407421.0, 3774157.2, 87.1, 1877.0, 0.0) ;
( 407402.2, 3774111.1, 103.9, 1706.0, 0.0) ;
( 407042.2, 3774215.9, 102.8, 1877.0, 0.0) ;
( 407062.9, 3774171.9, 103.3, 1877.0, 0.0) ;
( 407274.5, 3773962.0, 105.4, 1706.0, 0.0) ;
( 407311.0, 3774004.6, 104.4, 1706.0, 0.0) ;
( 407347.5, 3774047.2, 104.0, 1706.0, 0.0) ;
( 407088.3, 3774400.5, 102.6, 1877.0, 0.0) ;
( 406671.6, 3774404.1, 100.4, 1877.0, 0.0) ;
( 406528.8, 3774261.1, 98.6, 1877.0, 0.0) ;
( 406459.6, 3774238.8, 98.7, 1877.0, 0.0) ;
( 406384.9, 3774208.8, 99.4, 1877.0, 0.0) ;
( 406321.0, 3774185.3, 97.3, 1877.0, 0.0) ;
( 406286.0, 3774167.6, 98.4, 1877.0, 0.0) ;
( 406311.7, 3774096.3, 98.7, 1877.0, 0.0) ;
( 406314.3, 3774050.4, 97.5, 1877.0, 0.0) ;
( 406301.9, 3773997.6, 98.1, 1877.0, 0.0) ;
( 406267.3, 3773941.8, 98.0, 1877.0, 0.0) ;
( 406210.6, 3773872.2, 97.9, 1877.0, 0.0) ;
( 406153.2, 3773812.5, 97.8, 1877.0, 0.0) ;
( 406096.1, 3773763.8, 97.6, 1877.0, 0.0) ;
( 406096.2, 3773666.2, 84.8, 1877.0, 0.0) ;
( 406473.9, 3773666.7, 91.0, 1877.0, 0.0) ;
( 406437.8, 3773728.9, 97.0, 1877.0, 0.0) ;
( 406402.2, 3773774.9, 97.8, 1877.0, 0.0) ;
( 406428.8, 3773861.8, 99.4, 1877.0, 0.0) ;
( 406450.2, 3773890.7, 98.8, 1877.0, 0.0) ;
( 406530.8, 3773873.6, 97.8, 1877.0, 0.0) ;
( 406585.4, 3773875.0, 96.3, 1877.0, 0.0) ;
( 406613.4, 3773829.0, 97.6, 1877.0, 0.0) ;
( 406684.2, 3773790.4, 97.0, 1877.0, 0.0) ;

( 406727.8, 3773780.0, 97.9, 1877.0, 0.0) ;
( 406911.6, 3774225.0, 98.4, 1877.0, 0.0) ;
( 406942.5, 3774255.0, 98.0, 1877.0, 0.0) ;
( 406975.4, 3774267.9, 97.6, 1877.0, 0.0) ;
( 407031.9, 3774262.2, 102.0, 1877.0, 0.0) ;
```

--		DISTANCE	SOURCE		-- RECEPTOR LOCATION	
(METERS)		(METERS)	ID	XR (METERS)	YR	
			L0000902	407130.3		
3774478.3		-1.89	L0000903	407130.3		
3774478.3		0.23	L0000911	407172.4		
3774556.0		0.63	L0000912	407172.4		
3774556.0		-5.98	L0000913	407172.4		
3774556.0		0.36	L0000927	407214.9		
3774683.7		-2.89	L0000969	407011.8		
3774174.7		-1.45	L0000970	407011.8		
3774174.7		-5.99				

1.54, 3.09, 5.14, 8.23, 10.80,

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDEFAULT CONC ELEV

METEOROLOGICAL DATA ***

*** UP TO THE FIRST 24 HOURS OF

Surface file: ..\azus6.sfc
Met Version: 12345
Profile file: ..\azus6.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station

no.: 3190 Name: AZUSA
Name: UNKNOWN Year: 2005
Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN
Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT			
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
05	01	01	1	01	-34.3	0.336	-9.000	-9.000	-999.	447.		97.5
0.36	1.00	1.00	1.00	3.10	25.	9.1	280.9	5.5				
05	01	01	1	02	-41.5	0.406	-9.000	-9.000	-999.	595.		142.6
0.36	1.00	1.00	1.00	3.60	23.	9.1	280.9	5.5				
05	01	01	1	03	-54.0	0.527	-9.000	-9.000	-999.	879.		239.5
0.36	1.00	1.00	1.00	4.50	31.	9.1	280.4	5.5				
05	01	01	1	04	-41.6	0.406	-9.000	-9.000	-999.	605.		142.3
0.36	1.00	1.00	1.00	3.60	32.	9.1	280.4	5.5				
05	01	01	1	05	-34.4	0.336	-9.000	-9.000	-999.	450.		97.2
0.36	1.00	1.00	1.00	3.10	38.	9.1	280.4	5.5				
05	01	01	1	06	-41.7	0.406	-9.000	-9.000	-999.	595.		142.0
0.36	1.00	1.00	1.00	3.60	35.	9.1	279.9	5.5				
05	01	01	1	07	-47.2	0.460	-9.000	-9.000	-999.	718.		182.5
0.36	1.00	1.00	1.00	4.00	33.	9.1	279.9	5.5				
05	01	01	1	08	-36.5	0.412	-9.000	-9.000	-999.	610.		169.4
0.36	1.00	0.55	3.60	30.	9.1	279.9	5.5					
05	01	01	1	09	24.0	0.296	0.336	0.005	55.	378.		-95.7
0.36	1.00	0.32	2.20	57.	9.1	280.9	5.5					
05	01	01	1	10	77.9	0.220	1.189	0.005	764.	240.		-12.1
0.36	1.00	0.25	1.30	97.	9.1	285.4	5.5					
05	01	01	1	11	108.6	0.286	1.449	0.007	992.	351.		-19.0
0.36	1.00	0.22	1.80	149.	9.1	285.9	5.5					
05	01	01	1	12	123.8	0.232	1.622	0.010	1221.	258.		-8.9
0.36	1.00	0.21	1.30	191.	9.1	286.4	5.5					
05	01	01	1	13	109.9	0.286	1.570	0.009	1245.	352.		-18.8
0.36	1.00	0.21	1.80	214.	9.1	286.4	5.5					
05	01	01	1	14	38.3	0.205	1.107	0.009	1254.	216.		-19.9
0.36	1.00	0.22	1.30	237.	9.1	285.9	5.5					
05	01	01	1	15	20.8	0.249	0.905	0.009	1258.	286.		-65.7
0.36	1.00	0.26	1.80	239.	9.1	285.4	5.5					
05	01	01	1	16	3.3	0.278	0.491	0.009	1258.	336.		-569.9
0.36	1.00	0.35	2.20	241.	9.1	284.9	5.5					
05	01	01	1	17	-9.7	0.168	-9.000	-9.000	-999.	164.		43.3
0.36	1.00	0.62	1.80	236.	9.1	284.9	5.5					

05 01 01 1 18 -2.5 0.056 -9.000 -9.000 -999. 42. 6.2
0.36 1.00 1.00 1.00 0.90 263. 9.1 284.2 5.5
05 01 01 1 19 -5.2 0.081 -9.000 -9.000 -999. 53. 8.9
0.36 1.00 1.00 1.00 1.30 5. 9.1 283.8 5.5
05 01 01 1 20 -10.0 0.134 -9.000 -9.000 -999. 112. 21.1
0.36 1.00 1.00 1.00 1.80 16. 9.1 283.1 5.5
05 01 01 1 21 -16.3 0.218 -9.000 -9.000 -999. 234. 56.0
0.36 1.00 1.00 1.00 2.20 29. 9.1 283.1 5.5
05 01 01 1 22 -16.9 0.306 -9.000 -9.000 -999. 389. 149.7
0.36 1.00 1.00 1.00 2.70 28. 9.1 282.5 5.5
05 01 01 1 23 -16.9 0.306 -9.000 -9.000 -999. 389. 149.4
0.36 1.00 1.00 1.00 2.70 16. 9.1 282.0 5.5
05 01 01 1 24 -19.9 0.360 -9.000 -9.000 -999. 496. 206.7
0.36 1.00 1.00 1.00 3.10 22. 9.1 282.0 5.5

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
05 01 01 01 5.5 0 -999. -99.00 281.0 99.0 -99.00 -99.00
05 01 01 01 9.1 1 25. 3.10 -999.0 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES
AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S):
ON SITE
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

MICROGRAMS/M**3

X-COORD (M)		Y-COORD (M)	CONC	
X-COORD (M)	Y-COORD (M)		CONC	IN
- - - - -				
- - - - -				
406610.00	3774353.00		0.02061	
406920.00	3774202.00		0.02548	
406754.00	3773799.00		0.01451	
406993.60	3774221.29		0.02196	
407011.77	3774174.71		0.02240	
407029.94	3774128.13		0.02070	
407048.12	3774081.55		0.01847	
407066.29	3774034.96		0.01647	
407084.46	3773988.38		0.01392	
407102.63	3773941.80		0.01199	
407120.80	3773895.22		0.01013	
406946.43	3774189.14		0.02445	
407081.85	3774111.57		0.01831	
407116.69	3774075.71		0.01575	
407151.54	3774039.85		0.01344	
407186.38	3774003.98		0.01143	
407221.22	3773968.12		0.00970	
406921.04	3774116.91		0.02648	
406902.66	3774072.41		0.02697	
406884.27	3774027.91		0.02665	
406865.89	3773983.41		0.02534	
406847.51	3773938.90		0.02317	
406829.13	3773894.40		0.02038	
406810.75	3773849.90		0.01722	
406792.36	3773805.40		0.01406	
406773.98	3773760.90		0.01116	
406967.25	3774097.82		0.02445	
406948.87	3774053.32		0.02440	
406930.49	3774008.82		0.02369	
406912.11	3773964.32		0.02233	
406893.72	3773919.82		0.02033	

406875.34	3773875.31	0.01793
406856.96	3773830.81	0.01543
406838.58	3773786.31	0.01276
406820.20	3773741.81	0.00959
406995.08	3774034.23	0.02012
406976.70	3773989.73	0.01923
406958.32	3773945.23	0.01791
406939.94	3773900.73	0.01622
406921.55	3773856.23	0.01430
406903.17	3773811.72	0.01229
406884.79	3773767.22	0.01023
406866.41	3773722.72	0.00812
407022.91	3773970.64	0.01579
407004.53	3773926.14	0.01458
406986.15	3773881.64	0.01312
406967.77	3773837.14	0.01152
406949.38	3773792.64	0.00991
406931.00	3773748.13	0.00834
406912.62	3773703.63	0.00690
407142.65	3774129.55	0.01610
407050.74	3773907.05	0.01221
407032.36	3773862.55	0.01097
407013.98	3773818.05	0.00967
406995.60	3773773.55	0.00837
406977.22	3773729.05	0.00713
406958.83	3773684.54	0.00600
407188.87	3774110.47	0.01407
407133.72	3773976.96	0.01199
407078.57	3773843.46	0.00886
407060.19	3773798.96	0.00827
407041.81	3773754.46	0.00721
407023.43	3773709.96	0.00620
407005.05	3773665.46	0.00528
407235.08	3774091.38	0.01232
407216.70	3774046.88	0.01179
407124.79	3773824.37	0.00808
407106.40	3773779.87	0.00718
407088.02	3773735.37	0.00629
407069.64	3773690.87	0.00546
407051.26	3773646.37	0.00471
407281.29	3774072.29	0.01082
407262.91	3774027.79	0.01028
407207.76	3773894.28	0.00817
407189.38	3773849.78	0.00781
407171.00	3773805.28	0.00705
407152.62	3773760.78	0.00629
407134.24	3773716.28	0.00556
407115.85	3773671.78	0.00486

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES
AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S):
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

MICROGRAMS/M**3

X-COORD (M)		Y-COORD (M)		CONC	
X-COORD (M)	Y-COORD (M)	X-COORD (M)	Y-COORD (M)	CONC	CONC
- - - - -					
- - - - -					
406716.18	407097.47	3773731.35	3773627.28	0.00422	0.00422
406661.07	406738.94	3773693.08	3773686.83	0.00751	0.00751
406819.50	406727.36	3773638.19	3773638.19	0.00588	0.00588
406715.77	406649.48	3773671.86	3773644.44	0.00649	0.00649
406842.26	406784.46	3773627.34	3773597.79	0.00467	0.00467
406712.77	406637.89	3773541.95	3773552.24	0.00397	0.00397
406870.89	406798.64	3773589.18	3773589.18	0.00425	0.00425
406699.46	406626.30	3773493.10	3773547.17	0.00341	0.00341
406892.47	406948.76	3773543.39	3773604.42	0.00351	0.00351
406614.72	406686.73	3773498.53	3773444.32	0.00299	0.00299
406766.88	406847.02	3773453.94	3773463.55	0.00278	0.00278
406914.45	406969.18	3773498.02	3773557.36	0.00323	0.00323
406603.13	406674.33	3773449.89	3773395.59	0.00257	0.00257
406752.84	406831.34	3773405.00	3773414.42	0.00246	0.00246
406936.66	406990.26	3773452.90	3773511.03	0.00355	0.00355
407043.87	3773569.15				

406591.54 3773401.25 0.00283
406660.29 3773746.47 0.01212
406589.47 3773785.12 0.01914
406600.92 3773721.91 0.00906
406576.97 3773678.02 0.00840
406588.43 3773614.80 0.00595
406517.61 3773653.45 0.00775
406564.48 3773570.91 0.00503
406493.66 3773609.56 0.00620
406540.52 3773527.02 0.00434
406469.70 3773565.67 0.00509
406545.42 3773472.05 0.00358
406481.16 3773502.46 0.00413
406525.59 3773426.58 0.00315
406457.21 3773458.57 0.00360
406556.70 3773826.04 0.03218
406546.75 3773759.14 0.01635
406513.99 3773800.06 0.02821
406504.03 3773733.15 0.01381
406471.27 3773774.07 0.02273
406461.32 3773707.17 0.01165
406428.55 3773748.09 0.01756
406437.36 3773663.28 0.00857
406375.88 3773655.20 0.00802
406413.41 3773619.39 0.00660
406333.16 3773629.21 0.00677
406370.69 3773593.40 0.00589
406408.22 3773557.59 0.00497
406290.45 3773603.23 0.00562
406327.97 3773567.42 0.00505
406365.50 3773531.61 0.00447
406403.03 3773495.80 0.00399
406257.68 3773644.15 0.00630
406480.15 3773833.24 0.05286
406772.09 3773653.29 0.00611
406520.91 3773866.66 0.06034
406578.26 3773874.23 0.04525
406190.73 3773616.31 0.00484
406096.32 3773616.17 0.00365
406238.01 3773566.37 0.00452
406190.81 3773566.31 0.00415
406143.60 3773566.24 0.00375
406096.39 3773566.17 0.00330
406285.29 3773516.44 0.00402
406238.08 3773516.37 0.00382
406190.88 3773516.31 0.00358

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES
AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S):
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

MICROGRAMS/M**3
** CONC OF PM_10 IN

X-COORD (M) Y-COORD (M) CONC
X-COORD (M) Y-COORD (M) CONC
- - - - -
- - - - -

406143.67 3773516.24 0.00329
406096.46 3773516.17 0.00298
406332.57 3773466.51 0.00356
406285.36 3773466.44 0.00344
406238.15 3773466.37 0.00329
406190.95 3773466.31 0.00312
406096.54 3773466.17 0.00269
406474.26 3773416.71 0.00314
406427.05 3773416.64 0.00320
406379.84 3773416.58 0.00323
406332.64 3773416.51 0.00322
406285.43 3773416.44 0.00306
406238.23 3773416.37 0.00289
406191.02 3773416.31 0.00275
406143.81 3773416.24 0.00261
406096.61 3773416.17 0.00242
406474.33 3773366.71 0.00272
406427.12 3773366.64 0.00276
406379.92 3773366.58 0.00279
406332.71 3773366.51 0.00279
406285.50 3773366.44 0.00274
406238.30 3773366.37 0.00266
406191.09 3773366.31 0.00256
406143.89 3773366.24 0.00244
406096.68 3773366.17 0.00230
406512.27 3773338.65 0.00249
406776.89 3773711.06 0.00830
406427.19 3773316.64 0.00242
406379.99 3773316.58 0.00245
406332.78 3773316.51 0.00244
406285.58 3773316.44 0.00241

406238.37 3773316.37 0.00235
406191.16 3773316.31 0.00228
406143.96 3773316.24 0.00219
406096.75 3773316.17 0.00209
406512.94 3773289.00 0.00220
406589.87 3773333.58 0.00238
406427.27 3773266.64 0.00214
406380.06 3773266.58 0.00216
406332.85 3773266.51 0.00216
406285.65 3773266.44 0.00214
406238.44 3773266.37 0.00210
406191.23 3773266.31 0.00204
406144.03 3773266.24 0.00197
406096.82 3773266.17 0.00189
406046.25 3773666.10 0.00340
406046.18 3773714.91 0.00377
406046.11 3773763.72 0.00409
406010.95 3773630.69 0.00281
405996.18 3773714.84 0.00312
405996.11 3773763.65 0.00335
405960.95 3773630.62 0.00243
406025.71 3773545.36 0.00260
405946.18 3773714.76 0.00264
405946.11 3773763.57 0.00281
405910.95 3773630.55 0.00211
405940.34 3773559.88 0.00203
405990.41 3773509.95 0.00224
405896.18 3773714.69 0.00228
405896.11 3773763.50 0.00240
405864.62 3773621.64 0.00185
405882.99 3773577.48 0.00182
405901.36 3773533.31 0.00178
405963.95 3773470.90 0.00200
406008.17 3773452.66 0.00219
405846.25 3773665.81 0.00188
406052.39 3773434.41 0.00233
405846.11 3773763.43 0.00208
405813.88 3773623.34 0.00165
405831.52 3773580.94 0.00163
405849.15 3773538.54 0.00162
405866.79 3773496.14 0.00162
405926.87 3773436.22 0.00178
405969.32 3773418.71 0.00190
406011.78 3773401.20 0.00206
406054.23 3773383.68 0.00219
405796.25 3773665.74 0.00168
405796.18 3773714.55 0.00176

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault Conc ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES
AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S):
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

MICROGRAMS/M**3

X-COORD (M)		Y-COORD (M)		CONC	
X-COORD (M)	Y-COORD (M)	X-COORD (M)	Y-COORD (M)	CONC	CONC
- - - - -					
- - - - -					
405796.11	3773763.36			0.00182	
405763.39	3773624.44		0.00149		
405797.68	3773542.00		0.00145		
405831.97	3773459.55		0.00145		
405890.39	3773401.30		0.00159		
405972.93	3773367.25		0.00185		
405746.18	3773714.48		0.00157		
405746.11	3773763.29		0.00161		
405713.05	3773625.21		0.00135		
405746.63	3773544.45		0.00131		
405780.22	3773463.69		0.00130		
405854.24	3773366.24		0.00143		
405935.10	3773332.89		0.00165		
406015.96	3773299.53		0.00182		
405696.18	3773714.41		0.00141		
405696.11	3773763.22		0.00143		
406092.19	3773826.17		0.00556		
406019.51	3773814.46		0.00387		
406059.74	3773864.21		0.00481		
405985.60	3773849.33		0.00343		
406027.30	3773902.25		0.00413		
405952.28	3773885.46		0.00302		
405924.19	3773824.48		0.00271		
405994.85	3773940.29		0.00352		
405919.24	3773922.24		0.00264		
405889.99	3773858.71		0.00243		
405962.40	3773978.33		0.00299		
405886.38	3773959.37		0.00230		
405856.29	3773894.03		0.00217		
405826.20	3773828.70		0.00200		
405929.95	3774016.37		0.00254		
405853.62	3773996.73		0.00200		

405822.90 3773930.03 0.00192
405792.18 3773863.33 0.00181
405897.51 3774054.41 0.00217
405820.93 3774034.24 0.00175
405789.72 3773966.49 0.00169
405758.52 3773898.73 0.00163
405727.31 3773830.97 0.00154
405865.06 3774092.46 0.00188
406145.82 3773876.99 0.00816
406109.75 3773911.62 0.00640
406073.69 3773946.26 0.00511
406037.63 3773980.89 0.00414
406001.57 3774015.52 0.00337
405965.50 3774050.16 0.00277
405958.15 3774114.68 0.00245
405922.09 3774149.32 0.00207
406200.20 3773938.61 0.01280
406161.45 3773970.21 0.00869
406122.71 3774001.82 0.00636
406083.96 3774033.42 0.00483
406045.22 3774065.03 0.00376
406006.47 3774096.63 0.00301
405996.08 3774162.99 0.00255
405957.33 3774194.60 0.00213
406242.10 3773996.04 0.01705
406199.60 3774022.38 0.01043
406157.10 3774048.72 0.00712
406114.60 3774075.05 0.00517
406072.10 3774101.39 0.00392
406046.92 3774155.67 0.00310
406265.57 3774061.82 0.01779
406216.88 3774073.20 0.01022
406251.78 3774115.03 0.01181
406191.91 3774133.74 0.00660
406144.86 3774116.81 0.00536
406263.42 3774212.22 0.00648
406216.95 3774230.69 0.00459
406275.87 3774274.57 0.00439
406194.37 3774275.30 0.00335
406146.03 3774187.61 0.00416
406253.29 3774319.18 0.00313
406171.78 3774319.90 0.00256
406124.02 3774267.62 0.00281
406099.56 3774206.08 0.00325
406230.70 3774363.79 0.00238
406149.20 3774364.51 0.00203
406101.44 3774312.23 0.00225
406053.10 3774224.55 0.00263

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault Conc ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES
AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S):
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

MICROGRAMS/M**3

** CONC OF PM_10 IN
**

X-COORD (M) Y-COORD (M)		Y-COORD (M)		CONC	
X-COORD (M)	Y-COORD (M)	X-COORD (M)	Y-COORD (M)	CONC	CONC
- - - - -					
- - - - -					
406208.12	3774408.39			0.00189	
406126.61	3774409.12			0.00166	
406078.85	3774356.84			0.00184	
406031.09	3774304.56			0.00196	
406006.63	3774243.02			0.00219	
406185.53	3774453.00			0.00154	
406104.03	3774453.73			0.00138	
406056.27	3774401.45			0.00153	
406008.51	3774349.17			0.00165	
405960.17	3774261.48			0.00186	
406162.95	3774497.61			0.00129	
406081.44	3774498.34			0.00118	
406033.68	3774446.06			0.00130	
405985.92	3774393.78			0.00140	
405938.17	3774341.49			0.00147	
405913.70	3774279.95			0.00160	
405912.54	3774209.15			0.00183	
405910.80	3774102.95			0.00213	
406140.36	3774542.22			0.00110	
406303.76	3774232.27			0.00703	
406367.58	3774255.77			0.00901	
406318.40	3774290.94			0.00468	
406301.12	3774337.86			0.00324	
406283.84	3774384.78			0.00243	
406266.56	3774431.70			0.00191	
406249.29	3774478.62			0.00154	
406232.01	3774525.54			0.00126	
406182.82	3774560.71			0.00108	
406246.64	3774584.21			0.00102	
406441.09	3774285.18			0.01209	
406385.13	3774316.65			0.00553	
406366.57	3774363.08			0.00362	

406348.01 3774409.51 0.00262
406329.45 3774455.94 0.00200
406310.89 3774502.36 0.00158
406292.33 3774548.79 0.00129
406311.16 3774610.17 0.00103
406513.51 3774308.65 0.01579
406428.97 3774333.93 0.00635
406498.17 3774356.24 0.00831
406413.62 3774381.51 0.00402
406482.82 3774403.82 0.00502
406398.28 3774429.10 0.00284
406467.48 3774451.41 0.00338
406382.94 3774476.69 0.00215
406452.14 3774499.00 0.00247
406367.60 3774524.28 0.00169
406436.80 3774546.59 0.00189
406352.25 3774571.87 0.00135
406421.45 3774594.18 0.00150
406371.51 3774630.61 0.00107
406550.57 3774353.61 0.01221
406607.69 3774410.85 0.01006
406543.74 3774417.55 0.00643
406600.86 3774474.79 0.00548
406536.90 3774481.49 0.00386
406501.51 3774516.80 0.00272
406494.68 3774580.74 0.00195
406423.89 3774651.38 0.00114
406388.50 3774686.70 0.00095
406672.07 3774454.15 0.00910
406718.37 3774453.75 0.01049
406764.66 3774453.35 0.01155
406810.96 3774452.95 0.01248
406857.25 3774452.55 0.01321
406903.54 3774452.15 0.01323
406949.84 3774451.75 0.01400
406996.13 3774451.35 0.01457
407042.43 3774450.95 0.01493
407088.72 3774450.55 0.01506
406672.50 3774504.15 0.00588
406718.80 3774503.75 0.00683
406765.09 3774503.35 0.00771
406811.39 3774502.95 0.00852
406857.68 3774502.55 0.00825
406903.98 3774502.15 0.00909
406950.27 3774501.75 0.00985
406996.57 3774501.35 0.01048
407042.86 3774500.95 0.01099
407089.15 3774500.55 0.01147

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
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**MODELOPTs: RegDFault CONC ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES
AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S):
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

RECEPTOR POINTS *** ** DISCRETE CARTESIAN

MICROGRAMS/M**3

X-COORD (M)		Y-COORD (M)		CONC	
X-COORD (M)	Y-COORD (M)	X-COORD (M)	Y-COORD (M)	CONC	IN
- - - - -					
- - - - -					
406637.11	3774539.46			0.00404	
406719.23	3774553.74		0.00484		
406765.52	3774553.34		0.00550		
406811.82	3774552.94		0.00615		
406858.11	3774552.54		0.00678		
406904.41	3774552.14		0.00649		
406950.70	3774551.74		0.00714		
406997.00	3774551.34		0.00775		
407043.29	3774550.94		0.00831		
407089.59	3774550.54		0.00886		
406637.54	3774589.46		0.00296		
406565.89	3774560.10		0.00274		
406719.66	3774603.74		0.00355		
406765.96	3774603.34		0.00406		
406812.25	3774602.94		0.00459		
406858.55	3774602.54		0.00429		
406904.84	3774602.14		0.00478		
406951.13	3774601.74		0.00528		
406997.43	3774601.34		0.00573		
407043.72	3774600.94		0.00627		
406637.98	3774639.46		0.00229		
406566.33	3774610.10		0.00212		
406720.09	3774653.74		0.00272		
406766.39	3774653.34		0.00310		
406812.68	3774652.94		0.00350		
406858.98	3774652.54		0.00324		
406905.27	3774652.14		0.00361		
406951.57	3774651.74		0.00394		
406997.86	3774651.34		0.00434		
407044.16	3774650.94		0.00479		
407090.45	3774650.54		0.00528		

406566.76	3774660.10	0.00170	0.00160
406495.11	3774630.74		0.00159
406720.53	3774703.74	0.00183	
406766.82	3774703.34		0.00205
406813.12	3774702.94	0.00228	
406859.41	3774702.54		0.00253
406905.70	3774702.14	0.00273	
406952.00	3774701.74		0.00303
406998.29	3774701.34	0.00336	
407044.59	3774700.94		0.00371
407090.88	3774700.54	0.00411	
406632.87	3774737.01		0.00131
406591.07	3774719.88	0.00128	
406549.28	3774702.76		0.00125
406507.48	3774685.63	0.00123	
406465.69	3774668.50		0.00119
406674.66	3774754.14	0.00135	
406720.96	3774753.74		0.00150
406767.25	3774753.34	0.00167	
406813.55	3774752.94		0.00181
406859.84	3774752.54	0.00198	
406906.14	3774752.14		0.00217
406952.43	3774751.74	0.00240	
406998.73	3774751.34		0.00263
407045.02	3774750.94	0.00289	
407091.31	3774750.54		0.00316
406634.15	3774787.36	0.00108	
406552.27	3774753.80		0.00104
406470.39	3774720.25	0.00103	
406721.39	3774803.74		0.00121
406767.68	3774803.34	0.00134	
406813.98	3774802.94		0.00148
406860.27	3774802.54	0.00161	
406906.57	3774802.14		0.00176
406952.86	3774801.74	0.00189	
406999.16	3774801.34		0.00208
407045.45	3774800.94	0.00228	
407091.75	3774800.54		0.00251
407134.59	3774381.67	0.01561	
407115.78	3774335.55		0.01777
407096.97	3774289.42	0.01752	
407078.16	3774243.30		0.01864
407176.21	3774409.38	0.01426	
407130.34	3774478.26		0.01350
407180.89	3774362.79	0.01490	
407162.08	3774316.66		0.01607
407143.27	3774270.54	0.01710	

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
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**MODELOPTs: RegDFault CONC ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES
AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S):
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

RECEPTOR POINTS ***
*** DISCRETE CARTESIAN

MICROGRAMS/M**3

X-COORD (M)		Y-COORD (M)		CONC	
X-COORD (M)	Y-COORD (M)	X-COORD (M)	Y-COORD (M)	CONC	CONC
- - - - -					
- - - - -					
407222.50	407124.46	3774224.42		0.01656	
407222.50	3774390.50		0.01235		
407171.96	407217.82	3774437.09		0.01288	
407130.77	3774505.97		0.01197		
407227.18	407130.77	3774528.26		0.01084	
407189.56	3774343.91		0.01274		
407170.75	407208.37	3774297.78		0.01362	
407268.80	3774251.66		0.01438		
407259.44	407170.75	3774205.54		0.01612	
407264.12	3774371.62		0.01285		
407213.57	407264.12	3774418.21		0.01104	
407131.20	3774464.81		0.01016		
407254.67	407213.57	3774533.69		0.01006	
407235.86	3774555.97		0.00992		
407310.42	407131.20	3774578.26		0.00835	
407301.06	3774325.03		0.01181		
407217.05	407254.67	3774278.90		0.01175	
407315.10	3774232.78		0.01312		
407305.74	407217.05	3774186.66		0.01353	
407255.19	407310.42	3774352.74		0.01099	
407172.82	407305.74	3774399.33		0.01034	
407263.35	3774445.93		0.00994		
407361.40	407301.06	3774492.52		0.01025	
407319.78	3774561.40		0.00896		
407282.16	407214.01	3774583.68		0.00888	
407342.68	407172.82	3774605.97		0.00874	
407342.68	407131.64	3774628.26		0.00651	
407342.68	407300.97	3774306.14		0.01058	
407342.68	407300.97	3774260.02		0.01092	
407342.68	407282.16	3774213.90		0.01188	
407342.68	407263.35	3774167.77		0.01288	
407342.68	407361.40	3774333.86		0.01033	

407356.72 3774380.45 0.00956
407352.04 3774427.04 0.00911
407347.36 3774473.64 0.00898
407342.68 3774520.23 0.00923
407296.81 3774589.11 0.00809
407255.62 3774611.40 0.00766
407214.44 3774633.68 0.00845
407173.25 3774655.97 0.00650
407132.07 3774678.25 0.00504
407366.08 3774287.26 0.00980
407347.27 3774241.14 0.01003
407328.46 3774195.02 0.01086
407309.65 3774148.89 0.01103
407407.70 3774314.98 0.00949
407403.01 3774361.57 0.00923
407398.33 3774408.16 0.00884
407393.65 3774454.76 0.00844
407388.97 3774501.35 0.00816
407384.29 3774547.94 0.00848
407338.43 3774616.82 0.00735
407297.24 3774639.11 0.00687
407256.06 3774661.39 0.00670
407214.87 3774683.68 0.00713
407173.68 3774705.97 0.00496
407132.50 3774728.25 0.00389
407412.38 3774268.38 0.00915
407393.57 3774222.26 0.00921
407374.76 3774176.13 0.00989
407355.95 3774130.01 0.00995
407453.99 3774296.09 0.00911
407449.31 3774342.69 0.00878
407444.63 3774389.28 0.00855
407439.95 3774435.88 0.00828
407435.27 3774482.47 0.00786
407430.59 3774529.06 0.00755
407425.91 3774575.66 0.00794
407380.04 3774644.54 0.00672
407338.86 3774666.82 0.00587
407297.67 3774689.11 0.00587
407256.49 3774711.39 0.00622
407215.30 3774733.68 0.00530
407174.12 3774755.96 0.00379
407132.93 3774778.25 0.00305
407458.67 3774249.50 0.00845
407439.86 3774203.38 0.00858
407421.05 3774157.25 0.00899
407402.24 3774111.13 0.00916
407042.24 3774215.88 0.02143

*** AERMOD - VERSION 14134 *** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** Diesel PM10 Emissions
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**MODELOPTs: RegDEFAULT CONC ELEV

AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
*** THE ANNUAL AVERAGE CONCENTRATION VALUES
INCLUDING SOURCE(S):
ON SITE
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

RECEPTOR POINTS ***

*** DISCRETE CARTESIAN

MICROGRAMS/M**3
** CONC OF PM_10 IN

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
407062.88	3774171.89	0.01922			
407274.53	3773962.02	0.00856			
407311.02	3774004.62	0.00888			
407347.51	3774047.22	0.00907			
407088.29	3774400.55	0.02209			
406671.64	3774404.15	0.01970			
406528.85	3774261.06	0.03763			
406459.65	3774238.75	0.03373			
406384.86	3774208.85	0.02800			
406321.04	3774185.35	0.01454			
406286.00	3774167.61	0.01144			
406311.66	3774096.32	0.04050			
406314.26	3774050.44	0.04469			
406301.92	3773997.64	0.04554			
406267.29	3773941.76	0.03249			
406210.59	3773872.25	0.01457			
406153.17	3773812.46	0.00787			
406096.11	3773763.79	0.00514			
406096.25	3773666.17	0.00854			
406473.90	3773666.71	0.00854			
406437.83	3773728.88	0.01436			
406402.24	3773774.91	0.02558			
406428.82	3773861.75	0.16141			
406450.17	3773890.70	0.15826			
406530.85	3773873.62	0.04384			
406585.42	3773875.04	0.04384			
406613.42	3773829.01	0.02637			
406684.24	3773790.36	0.01586			
406727.77	3773779.99	0.01352			
406911.59	3774225.00	0.02510			
406942.49	3774255.02	0.02268			
406975.43	3774267.87	0.02120			
407031.86	3774262.18	0.02046			

*** AERMOD - VERSION 14134 *** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** Diesel PM10 Emissions
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**MODELOPTs: RegDEFAULT CONC ELEV

CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
*** THE 1ST HIGHEST 24-HR AVERAGE
INCLUDING SOURCE(S):
ON SITE
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

RECEPTOR POINTS ***

*** DISCRETE CARTESIAN

MICROGRAMS/M**3
** CONC OF PM_10 IN

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
406368.00	3774208.00	1.08874			
406610.00	3774353.00	0.47310			
406920.00	3774202.00	0.48932			
406754.00	3773799.00	0.51662			
406993.60	3774221.29	0.41874			
407011.77	3774174.71	0.40241			
407029.94	3774128.13	0.36707			
407048.12	3774081.55	0.33873			
407066.29	3774034.96	0.34472			
407084.46	3773988.38	0.30941			
407102.63	3773941.80	0.25408			
407120.80	3773895.22	0.23463			
406946.43	3774189.14	0.45793			
407081.85	3774111.57	0.34933			
407116.69	3774075.71	0.32109			
407151.54	3774039.85	0.28920			
407186.38	3774003.98	0.25940			
407221.22	3773968.12	0.23048			
406921.04	3774116.91	0.47034			
406902.66	3774072.41	0.47632			
406884.27	3774027.91	0.49051			
406865.89	3773983.41	0.49543			
406847.51	3773938.90	0.49431			
406810.75	3773849.90	0.48098			
406792.36	3773805.40	0.48524			
406773.98	3773760.90	0.44791			
406967.25	3774097.82	0.42120			
406948.87	3774053.32	0.44047			
406930.49	3774008.82	0.44153			
406912.11	3773964.32	0.43847			
406893.72	3773919.82	0.43227			

406875.34 3773875.31 0.41929 (06082024)
406856.96 3773830.81 0.44027 (08080924)
406838.58 3773786.31 0.43907 (08080924)
406820.20 3773741.81 0.39978 (08080924)
406995.08 3774034.23 0.37871 (08082424)
406976.70 3773989.73 0.37093 (08081824)
406958.32 3773945.23 0.36390 (06082024)
406939.94 3773900.73 0.35713 (06082024)
406921.55 3773856.23 0.35103 (08080924)
406884.79 3773767.22 0.37797 (08080924)
406866.41 3773722.72 0.35634 (08080924)
407022.91 3773970.64 0.31543 (08081824)
407004.53 3773926.14 0.30977 (09082424)
406986.15 3773881.64 0.29906 (06082024)
406967.77 3773837.14 0.30381 (08080924)
406949.38 3773792.64 0.32796 (08080924)
406931.00 3773748.13 0.33366 (08080924)
406912.62 3773703.63 0.31932 (08080924)
407142.65 3774129.55 0.30859 (06082524)
407050.74 3773907.05 0.27272 (09082424)
407032.36 3773862.55 0.26043 (09082424)
407013.98 3773818.05 0.26911 (08080924)
406995.60 3773773.55 0.29090 (08080924)
406977.22 3773729.05 0.29820 (08080924)
406958.83 3773684.54 0.28881 (08080924)
407188.87 3774110.47 0.28433 (06082524)
407133.72 3773976.96 0.27377 (08081824)
407078.57 3773843.46 0.24990 (09082424)
407060.19 3773798.96 0.24094 (08080924)
407041.81 3773754.46 0.26064 (08080924)
407023.43 3773709.96 0.26884 (08080924)
407005.05 3773665.46 0.26005 (06082524)
407235.08 3774091.38 0.26005 (06082524)
407216.70 3774046.88 0.25600 (08081824)
407124.79 3773824.37 0.20481 (09082424)
407106.40 3773779.87 0.21749 (08080924)
407088.02 3773735.37 0.23531 (08080924)
407069.64 3773690.87 0.24388 (08080924)
407051.26 3773646.37 0.24046 (08080924)
407281.29 3774072.29 0.23634 (06082524)
407262.91 3774027.79 0.23170 (08081824)
407207.76 3773894.28 0.22230 (09082424)
407189.38 3773849.78 0.19554 (09082424)
407171.00 3773805.28 0.18350 (09082424)
407152.62 3773760.78 0.19749 (08080924)
407134.24 3773716.28 0.21380 (08080924)
407115.85 3773671.78 0.22250 (08080924)

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

PAGE 79
**MODELOPTs: RegDFAULT CONC ELEV

*** THE 1ST HIGHEST 24-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): ONSITE
, L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
, L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
, L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
, L0000769 , L0000770 , L0000771 , . . . ,

RECEPTOR POINTS *** ** DISCRETE CARTESIAN

MICROGRAMS/M**3 ** CONC OF PM_10 IN

X-COORD (M) Y-COORD (M) X-COORD (M) Y-COORD (M) CONC (YMMDDHH) CONC (YMMDDHH)
- - - - -
407097.47 3773627.28 0.22092 (08080924)
406716.18 3773731.35 0.42390 (08080924)
406738.94 3773686.83 0.34329 (05081824)
406661.07 3773693.08 0.42833 (05081824)
406727.36 3773638.19 0.33633 (05081824)
406819.50 3773671.86 0.31272 (08080924)
406649.48 3773644.44 0.37785 (05081824)
406715.77 3773589.55 0.30981 (05081824)
406784.46 3773597.79 0.28023 (05081824)
406842.26 3773627.34 0.25722 (08080924)
406637.89 3773595.80 0.31490 (05081824)
406712.77 3773541.95 0.27179 (05081824)
406798.64 3773552.24 0.25808 (05081824)
406870.89 3773589.18 0.21745 (08080924)
406626.30 3773547.17 0.24642 (05081824)
406699.46 3773493.10 0.22647 (05081824)
406781.90 3773502.99 0.24216 (05081824)
406892.47 3773543.39 0.20315 (05081824)
406948.76 3773604.42 0.23554 (08080924)
406614.72 3773498.53 0.23208 (06080624)
406686.73 3773444.32 0.17726 (05081824)
406766.88 3773453.94 0.21373 (05081824)
406847.02 3773463.55 0.21225 (05081824)
406914.45 3773498.02 0.19036 (05081824)
406969.18 3773557.36 0.19848 (08080924)
406603.13 3773449.89 0.21890 (06080624)
406674.33 3773395.59 0.17061 (06080624)
406752.84 3773405.00 0.17799 (05081824)
406831.34 3773414.42 0.19626 (05081824)
406936.66 3773452.90 0.17824 (05081824)
406990.26 3773511.03 0.16564 (08080924)
407043.87 3773569.15 0.20570 (08080924)

406591.54 3773401.25 0.20260 (06080624)
406660.29 3773746.47 0.47752 (05081824)
406589.47 3773785.12 0.65173 (05081824)
406600.92 3773721.91 0.52488 (05081824)
406576.97 3773678.02 0.43069 (05081824)
406588.43 3773614.80 0.31970 (05081824)
406517.61 3773653.45 0.43509 (06080624)
406564.48 3773570.91 0.30717 (06080624)
406493.66 3773609.56 0.39486 (06080624)
406540.52 3773527.02 0.29167 (06080624)
406469.70 3773565.67 0.34078 (06081324)
406545.42 3773472.05 0.25145 (06080624)
406481.16 3773502.46 0.28319 (06081324)
406525.59 3773426.58 0.22599 (06080624)
406457.21 3773458.57 0.24539 (06081324)
406556.70 3773826.04 0.86577 (08080924)
406546.75 3773759.14 0.63344 (05081824)
406513.99 3773800.06 0.83493 (05081824)
406504.03 3773733.15 0.58472 (06081524)
406471.27 3773774.07 0.82477 (06081524)
406461.32 3773707.17 0.63009 (06081324)
406428.55 3773748.09 0.89230 (06081524)
406437.36 3773663.28 0.53249 (06081324)
406375.88 3773655.20 0.56967 (06081624)
406413.41 3773619.39 0.42110 (06081324)
406333.16 3773629.21 0.53621 (06081624)
406370.69 3773593.40 0.44780 (06081624)
406408.22 3773557.59 0.34275 (06081624)
406290.45 3773603.23 0.45334 (06081624)
406327.97 3773567.42 0.41958 (06081624)
406365.50 3773531.61 0.35583 (06081624)
406403.03 3773495.80 0.29132 (06081624)
406257.68 3773644.15 0.45231 (06081724)
406480.15 3773833.24 1.17847 (08080924)
406772.09 3773653.29 0.30198 (05081824)
406520.91 3773866.66 1.26334 (08080924)
406578.26 3773874.23 1.05533 (08080924)
406610.82 3773829.25 0.77455 (08080924)
406190.73 3773616.31 0.40310 (09080724)
406143.53 3773616.24 0.40075 (09080724)
406096.32 3773616.17 0.36325 (09080724)
406238.01 3773566.37 0.34617 (06081724)
406190.81 3773566.31 0.32384 (09080724)
406143.60 3773566.24 0.34208 (09080724)
406096.39 3773566.17 0.32887 (09080724)
406285.29 3773516.44 0.34632 (06081624)
406238.08 3773516.37 0.30886 (06081624)
406190.88 3773516.31 0.28819 (06081724)

*** AERMOD - VERSION 14134 *** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** Diesel PM10 Emissions
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**MODELOPTs: RegDFault CONC ELEV

*** THE 1ST HIGHEST 24-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): ONSITE
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,
*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

MICROGRAMS/M**3
** CONC OF PM_10 IN

X-COORD (M) Y-COORD (M) CONC (YYMDDHH)
X-COORD (M) Y-COORD (M) CONC (YYMDDHH)
- - - - -
406143.67 3773516.24 0.28388 (09080724)
406096.46 3773516.17 0.28923 (09080724)
406332.57 3773466.51 0.30664 (06081624)
406285.36 3773466.44 0.30456 (06081624)
406238.15 3773466.37 0.27973 (06081624)
406190.95 3773466.31 0.25705 (06081724)
406143.74 3773466.24 0.23850 (06081724)
406096.54 3773466.17 0.24969 (09080724)
406474.26 3773416.71 0.21710 (06081324)
406427.05 3773416.64 0.22332 (06081624)
406379.84 3773416.58 0.25790 (06081624)
406332.64 3773416.51 0.27971 (06081624)
406285.43 3773416.44 0.27602 (06081624)
406238.23 3773416.37 0.25501 (06081624)
406191.02 3773416.31 0.22830 (06081724)
406143.81 3773416.24 0.22097 (06081724)
406096.61 3773416.17 0.21241 (09080724)
406474.33 3773366.71 0.18831 (06081324)
406427.12 3773366.64 0.19769 (05081724)
406379.92 3773366.58 0.22572 (06081624)
406332.71 3773366.51 0.24496 (06081624)
406285.50 3773366.44 0.25035 (06081624)
406238.30 3773366.37 0.23996 (06081624)
406191.09 3773366.31 0.21629 (06081624)
406143.89 3773366.24 0.21218 (06081724)
406096.68 3773366.17 0.19680 (06081724)
406512.27 3773338.65 0.17916 (06080624)
406776.89 3773711.06 0.37393 (08080924)
406427.19 3773316.64 0.17816 (05081724)
406379.99 3773316.58 0.19949 (06081624)
406332.78 3773316.51 0.21651 (06081624)
406285.58 3773316.44 0.22313 (06081624)

406238.37 3773316.37 0.21750 (06081624)
406191.16 3773316.31 0.20042 (06081624)
406143.96 3773316.24 0.19241 (06081724)
406096.75 3773316.17 0.18369 (06081724)
406512.94 3773289.00 0.15866 (06080624)
406589.87 3773333.58 0.17658 (06080624)
406427.27 3773266.64 0.16164 (05081724)
406380.06 3773266.58 0.17782 (06081624)
406332.85 3773266.51 0.19295 (06081624)
406285.65 3773266.44 0.20008 (06081624)
406238.44 3773266.37 0.19758 (06081624)
406191.23 3773266.31 0.18546 (06081624)
406144.03 3773266.24 0.17001 (06081724)
406096.82 3773266.17 0.17001 (06081724)
406046.25 3773666.10 0.33267 (06080824)
406046.18 3773714.91 0.38181 (06080824)
406046.11 3773763.72 0.40338 (06080824)
406010.95 3773630.69 0.28224 (06080824)
405996.18 3773714.84 0.32869 (06080824)
405996.11 3773763.65 0.33067 (06080824)
405960.95 3773630.62 0.26432 (06080824)
406025.71 3773545.36 0.27407 (09080724)
405946.18 3773714.76 0.28037 (06080824)
405946.11 3773763.57 0.27110 (06080824)
405910.95 3773630.55 0.23993 (06080824)
405940.34 3773559.88 0.21179 (06080824)
405990.41 3773509.95 0.24110 (09080724)
405896.11 3773714.69 0.23750 (06080824)
405896.62 3773621.64 0.22293 (06080824)
405882.99 3773577.48 0.21498 (06080824)
405901.36 3773533.31 0.19209 (06080824)
405963.95 3773470.90 0.22073 (09080724)
406008.17 3773452.66 0.23516 (09080724)
406052.39 3773434.41 0.23217 (09080724)
405846.25 3773665.81 0.20815 (06080824)
405846.18 3773714.62 0.20106 (06080824)
405846.11 3773763.43 0.18408 (06080824)
405813.88 3773623.34 0.19125 (06080824)
405831.52 3773580.94 0.19340 (06080824)
405849.15 3773538.54 0.18756 (06080824)
405866.79 3773496.14 0.17453 (06080824)
405926.87 3773436.22 0.20030 (09080724)
405969.32 3773418.71 0.21005 (09080724)
406011.78 3773401.20 0.21583 (09080724)
406054.23 3773383.68 0.20842 (09080724)
405796.25 3773665.74 0.18051 (06080824)
405796.18 3773714.55 0.17028 (06080824)

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
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**MODELOPTs: RegDFault CONC ELEV

CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
*** THE 1ST HIGHEST 24-HR AVERAGE
INCLUDING SOURCE(S): ONSITE
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

MICROGRAMS/M**3
** CONC OF PM_10 IN

X-COORD (M)	Y-COORD (M)	X-COORD (M)	Y-COORD (M)	CONC (YMMDDHH)	CONC (YMMDDHH)
405796.11	3773763.36	0.15283	(06080824)		
405763.39	3773624.44	0.16857	(06080824)		
405797.68	3773542.00	0.17474	(06080824)		
405831.97	3773459.55	0.15729	(06080824)		
405890.39	3773401.30	0.18257	(09080724)		
405972.93	3773367.25	0.20162	(09080724)		
405746.18	3773714.48	0.14452	(06080824)		
405746.11	3773763.29	0.14021	(06080924)		
405713.05	3773625.21	0.14810	(06080824)		
405746.63	3773544.45	0.16013	(06080824)		
405780.22	3773463.69	0.15223	(06080824)		
405854.24	3773366.24	0.16595	(09080724)		
405935.10	3773332.89	0.18480	(09080724)		
406015.96	3773299.53	0.17408	(09080724)		
405696.18	3773714.41	0.12302	(06080824)		
405696.11	3773763.22	0.12889	(06080924)		
406092.19	3773826.17	0.48526	(06080824)		
406019.51	3773814.46	0.34229	(06080824)		
406059.74	3773864.21	0.36785	(06080824)		
405985.60	3773849.33	0.26137	(06080824)		
406027.30	3773902.25	0.31921	(05082224)		
405952.28	3773885.46	0.25408	(05082224)		
405924.19	3773824.48	0.21321	(06080824)		
405994.85	3773940.29	0.28997	(05082224)		
405919.24	3773922.24	0.23733	(05082224)		
405889.99	3773858.71	0.21063	(05082224)		
405962.40	3773978.33	0.24860	(05082224)		
405886.38	3773959.37	0.21008	(05082224)		
405856.29	3773894.03	0.20337	(05082224)		
405826.20	3773828.70	0.17485	(05082224)		
405929.95	3774016.37	0.21470	(05082724)		
405853.62	3773996.73	0.17778	(05082224)		

405822.90 3773930.03 0.18690 (05082224)
405792.18 3773863.33 0.17380 (05082224)
405897.51 3774054.41 0.19523 (05082724)
405820.93 3774034.24 0.15577 (05082724)
405789.72 3773966.49 0.16459 (05082224)
405758.52 3773898.73 0.16502 (05082224)
405727.31 3773830.97 0.14839 (05082224)
405865.06 3774092.46 0.17828 (06082724)
406145.82 3773876.99 0.60313 (06080824)
406109.75 3773911.62 0.43603 (09082924)
406073.69 3773946.26 0.37209 (05082224)
406037.63 3773980.89 0.31119 (05082224)
406001.57 3774015.52 0.27641 (05082724)
405965.50 3774050.16 0.24299 (05082724)
405958.15 3774114.68 0.24008 (06082724)
405922.09 3774149.32 0.21919 (06082724)
406200.20 3773938.61 0.83807 (09082924)
406161.45 3773970.21 0.60539 (09082924)
406122.71 3774001.82 0.46106 (05082724)
406083.96 3774033.42 0.38268 (05082724)
406045.22 3774065.03 0.31910 (05082724)
406006.47 3774096.63 0.27477 (06082724)
405996.08 3774162.99 0.26047 (06082724)
405957.33 3774194.60 0.22718 (06082724)
406242.10 3773996.04 1.14549 (09082524)
406199.60 3774022.38 0.75270 (09082624)
406157.10 3774048.72 0.55403 (09082524)
406114.60 3774075.05 0.43566 (09082524)
406072.10 3774101.39 0.35230 (09082524)
406046.92 3774155.67 0.30814 (09082524)
406265.57 3774061.82 1.35367 (09082524)
406216.88 3774073.20 0.88075 (09082524)
406251.78 3774115.03 1.14409 (09082524)
406191.91 3774133.74 0.70596 (09082524)
406144.86 3774116.81 0.52767 (09082524)
406263.42 3774212.22 0.84126 (09082524)
406216.95 3774230.69 0.60714 (09082524)
406275.87 3774274.57 0.60761 (09082524)
406194.37 3774275.30 0.46800 (09082524)
406146.03 3774187.61 0.48564 (09082524)
406253.29 3774319.18 0.46562 (09082524)
406171.78 3774319.90 0.37532 (09082524)
406124.02 3774267.62 0.36176 (09082524)
406099.56 3774206.08 0.37252 (09082524)
406230.70 3774363.79 0.37237 (09082524)
406149.20 3774364.51 0.30984 (09082524)
406101.44 3774312.23 0.29982 (09082524)
406053.10 3774224.55 0.29454 (09082524)

*** AERMOD - VERSION 14134 *** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** Diesel PM10 Emissions
*** 13:01:31

PAGE 82
**MODELOPTs: RegDFault CONC ELEV

*** THE 1ST HIGHEST 24-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): ONSITE
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,
*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

MICROGRAMS/M**3
** CONC OF PM_10 IN

X-COORD (M) Y-COORD (M) CONC (YMMDDHH)
X-COORD (M) Y-COORD (M) CONC (YMMDDHH)
- - - - -
406208.12 3774408.39 0.30609 (09082524)
406126.61 3774409.12 0.26145 (09082524)
406078.85 3774356.84 0.25374 (09082524)
406031.09 3774304.56 0.23928 (09082524)
406006.63 3774243.02 0.23933 (09082524)
406185.53 3774453.00 0.25654 (09082524)
406104.03 3774453.73 0.22429 (09082524)
406056.27 3774401.45 0.21856 (09082524)
406008.51 3774349.17 0.20705 (09082524)
405960.17 3774261.48 0.19930 (09082524)
406162.95 3774497.61 0.21825 (09082524)
406081.44 3774498.34 0.19516 (09082524)
406033.68 3774446.06 0.19111 (09082524)
405985.92 3774393.78 0.18129 (09082524)
405938.17 3774341.49 0.16894 (09082524)
405913.70 3774279.95 0.17525 (09082224)
405912.54 3774209.15 0.20285 (06082724)
405910.80 3774102.95 0.20706 (06082724)
406140.36 3774542.22 0.18812 (09082524)
406303.76 3774232.27 0.84408 (09082524)
406367.58 3774255.77 0.58273 (09082524)
406318.40 3774290.94 0.52741 (09082524)
406301.12 3774337.86 0.40261 (09082524)
406283.84 3774384.78 0.32173 (09082524)
406266.56 3774431.70 0.26490 (09082524)
406249.29 3774478.62 0.22244 (09082524)
406232.01 3774525.54 0.19010 (09082524)
406182.82 3774560.71 0.17718 (09082524)
406246.64 3774584.21 0.14658 (09082524)
406441.09 3774285.18 0.50795 (06082324)
406385.13 3774316.65 0.31281 (06082324)
406366.57 3774363.08 0.22846 (09082524)

406348.01 3774409.51 0.19604 (09082524)
406329.45 3774455.94 0.17291 (09082524)
406310.89 3774502.36 0.15520 (09082524)
406292.33 3774548.79 0.14103 (09082524)
406311.16 3774610.17 0.09793 (09082524)
406513.51 3774308.65 0.46722 (07082624)
406428.97 3774333.93 0.35383 (06082324)
406498.17 3774356.24 0.34611 (06082324)
406413.62 3774381.51 0.26187 (06082324)
406482.82 3774403.82 0.27669 (06082324)
406398.28 3774429.10 0.19870 (06082324)
406467.48 3774451.41 0.22594 (06082324)
406382.94 3774476.69 0.15332 (06082324)
406452.14 3774499.00 0.18575 (06082324)
406367.60 3774524.28 0.11982 (06082324)
406436.80 3774546.59 0.15298 (06082324)
406352.25 3774571.87 0.09461 (06082324)
406421.45 3774594.18 0.12618 (06082324)
406371.51 3774630.61 0.08719 (06082324)
406550.57 3774353.61 0.37427 (07082624)
406607.69 3774410.85 0.30277 (07082624)
406543.74 3774417.55 0.25570 (06082324)
406600.86 3774474.79 0.21339 (07082624)
406536.90 3774481.49 0.20542 (06082324)
406501.51 3774516.80 0.18645 (06082324)
406494.68 3774580.74 0.15428 (06082324)
406423.89 3774651.38 0.11902 (06082324)
406388.50 3774686.70 0.08588 (06082324)
406672.07 3774454.15 0.26199 (06080424)
406718.37 3774453.75 0.28144 (06080424)
406764.66 3774453.35 0.28992 (06080424)
406810.96 3774452.95 0.29056 (06080424)
406857.25 3774452.55 0.28637 (08082924)
406903.54 3774452.15 0.31205 (08082924)
406949.84 3774451.75 0.33075 (08082924)
406996.13 3774451.35 0.34041 (08082924)
407042.43 3774450.95 0.34260 (08082924)
407088.72 3774450.55 0.33701 (08082924)
406672.50 3774504.15 0.20592 (07082624)
406718.80 3774503.75 0.21380 (06080424)
406765.09 3774503.35 0.22662 (06080424)
406811.39 3774502.95 0.23283 (06080424)
406857.68 3774502.55 0.24500 (06080424)
406903.98 3774502.15 0.24247 (06080424)
406950.27 3774501.75 0.24562 (08082924)
406996.57 3774501.35 0.26386 (08082924)
407042.86 3774500.95 0.27549 (08082924)
407089.15 3774500.55 0.28217 (08082924)

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

*** THE 1ST HIGHEST 24-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): ONSITE
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,
*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

MICROGRAMS/M**3
** CONC OF PM_10 IN

X-COORD (M) Y-COORD (M) X-COORD (M) Y-COORD (M) CONC (YMMDDHH) CONC (YMMDDHH)
- - - - -
406637.11 3774539.46 0.17176 (07082624)
406719.23 3774553.74 0.17470 (07082624)
406765.52 3774553.34 0.18151 (06080424)
406811.82 3774552.94 0.19079 (06080424)
406858.11 3774552.54 0.19568 (06080424)
406904.41 3774552.14 0.20578 (06080424)
406950.70 3774551.74 0.20377 (06080424)
406997.00 3774551.34 0.19978 (08082924)
407043.29 3774550.94 0.21697 (08082924)
407089.59 3774550.54 0.23036 (08082924)
406637.54 3774589.46 0.14072 (07082624)
406565.89 3774560.10 0.15975 (06082324)
406719.66 3774603.74 0.14885 (07082624)
406765.96 3774603.34 0.15006 (07082624)
406812.25 3774602.94 0.15731 (06080424)
406858.55 3774602.54 0.17024 (06080424)
406904.84 3774602.14 0.17506 (06080424)
406951.13 3774601.74 0.17710 (06080424)
406997.43 3774601.34 0.17647 (06080424)
407043.72 3774600.94 0.17362 (06080424)
407090.02 3774600.54 0.18359 (08082924)
406637.98 3774639.46 0.11861 (06082324)
406566.33 3774610.10 0.14186 (06082324)
406720.09 3774653.74 0.12798 (07082624)
406766.39 3774653.34 0.13142 (07082624)
406812.68 3774652.94 0.13078 (07082624)
406858.98 3774652.54 0.14241 (06080424)
406905.27 3774652.14 0.14899 (06080424)
406951.57 3774651.74 0.15314 (06080424)
406997.86 3774651.34 0.15439 (06080424)
407044.16 3774650.94 0.15400 (06080424)
407090.45 3774650.54 0.15261 (06080424)

40638.41 3774689.46 0.12004 (06082324)
406566.76 3774660.10 0.12723 (06082324)
406495.11 3774630.74 0.13520 (06082324)
406720.53 3774703.74 0.12486 (07082624)
406766.82 3774703.34 0.13406 (07082624)
406813.12 3774702.94 0.13552 (07082624)
406859.41 3774702.54 0.12967 (07082624)
406905.70 3774702.14 0.12724 (06080424)
406952.00 3774701.74 0.13480 (06080424)
406998.29 3774701.34 0.13480 (06080424)
407044.59 3774700.94 0.13597 (06080424)
407090.88 3774700.54 0.13622 (06080424)
406632.87 3774737.01 0.13622 (06082324)
406591.07 3774719.88 0.13283 (06082324)
406549.28 3774702.76 0.14314 (06082324)
406507.48 3774685.63 0.14514 (06082324)
406465.69 3774668.50 0.13699 (06082324)
406674.66 3774754.14 0.09954 (06082324)
406720.96 3774753.74 0.10555 (07082624)
406767.25 3774753.34 0.11756 (07082624)
406813.55 3774752.94 0.12467 (07082624)
406859.84 3774752.54 0.12411 (07082624)
406906.14 3774752.14 0.11695 (07082624)
406952.43 3774751.74 0.11401 (06080424)
406998.73 3774751.34 0.11766 (06080424)
407045.02 3774750.94 0.11979 (06080424)
407091.31 3774750.54 0.12104 (06080424)
406634.15 3774787.36 0.11283 (06082324)
406552.27 3774753.80 0.13195 (06082324)
406470.39 3774720.25 0.12187 (06082324)
406721.39 3774803.74 0.08921 (07083124)
406767.68 3774803.34 0.10354 (07082624)
406813.98 3774802.94 0.11277 (07082624)
406860.27 3774802.54 0.11589 (07082624)
406906.57 3774802.14 0.11283 (07082624)
406952.86 3774801.74 0.10562 (07082624)
406999.16 3774801.34 0.10291 (06080424)
407045.45 3774800.94 0.10548 (06080424)
407091.75 3774800.54 0.10717 (06080424)
407134.59 3774381.67 0.30819 (05080124)
407115.78 3774335.55 0.37559 (05080124)
407096.97 3774289.42 0.34293 (05080124)
407078.16 3774243.30 0.35394 (05080124)
407176.21 3774409.38 0.31607 (05080124)
407130.34 3774478.26 0.30748 (08082924)
407180.89 3774362.79 0.32955 (05080124)
407162.08 3774316.66 0.34792 (05080124)
407143.27 3774270.54 0.35656 (05080124)

*** AERMOD - VERSION 14134 *** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFault CONC ELEV

*** THE 1ST HIGHEST 24-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): ONSITE
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,
*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

MICROGRAMS/M**3

X-COORD (M) Y-COORD (M) X-COORD (M) Y-COORD (M) CONC (YMMDDHH) CONC (YMMDDHH)
- - - - -
407124.46 3774224.42 0.31125 (05080424)
407222.50 3774390.50 0.26040 (05080124)
407217.82 3774437.09 0.30015 (07080224)
407171.96 3774505.97 0.27972 (08082924)
407130.77 3774528.26 0.26405 (08082924)
407227.18 3774343.91 0.26403 (05080124)
407189.56 3774251.66 0.27639 (05080124)
407170.75 3774205.54 0.29048 (05080124)
407268.80 3774371.62 0.29048 (05080124)
407259.44 3774464.81 0.22087 (05080124)
407213.57 3774533.69 0.24369 (08082924)
407172.39 3774555.97 0.21590 (08082924)
407273.48 3774325.03 0.24252 (05080124)
407254.67 3774278.90 0.23005 (05080124)
407235.86 3774232.78 0.25232 (08080424)
407217.05 3774186.66 0.25515 (05080424)
407315.10 3774352.74 0.22949 (05080124)
407310.42 3774399.33 0.22270 (05080124)
407305.74 3774445.93 0.21793 (05080124)
407301.06 3774492.52 0.24862 (07080224)
407255.19 3774561.40 0.23113 (08082924)
407214.01 3774583.68 0.22339 (08082924)
407172.82 3774605.97 0.21245 (08082924)
407131.64 3774628.26 0.17348 (08082924)
407319.78 3774306.14 0.21130 (05080124)
407300.97 3774260.02 0.21355 (05080424)
407282.16 3774213.90 0.22830 (05080424)
407263.35 3774167.77 0.25369 (05080424)
407361.40 3774333.86 0.21175 (05080124)

407356.72 3774380.45 0.20290 (05080124)
407352.04 3774427.04 0.19836 (05080124)
407347.36 3774473.64 0.19927 (05080124)
407342.68 3774520.23 0.22688 (07080224)
407296.81 3774589.11 0.21885 (08082924)
407255.62 3774611.40 0.20172 (08082924)
407214.44 3774633.68 0.16763 (08082924)
407173.25 3774655.97 0.16763 (08082924)
407132.07 3774678.25 0.19375 (05080424)
407366.08 3774287.26 0.19375 (05080424)
407347.27 3774241.14 0.19607 (05080424)
407328.46 3774195.02 0.20719 (05080424)
407309.65 3774148.89 0.20486 (06082524)
407407.70 3774314.98 0.18857 (05080124)
407403.01 3774361.57 0.19227 (05080124)
407398.33 3774408.16 0.19045 (05080124)
407393.65 3774454.76 0.18623 (05080124)
407388.97 3774501.35 0.18275 (05080124)
407384.29 3774547.94 0.21277 (07080224)
407338.43 3774616.82 0.20643 (08082924)
407297.24 3774639.11 0.19186 (08082924)
407256.06 3774661.39 0.17605 (08082924)
407214.87 3774683.68 0.16942 (08082924)
407173.68 3774705.97 0.13574 (06080424)
407132.50 3774728.25 0.12836 (06080424)
407412.38 3774268.38 0.18091 (05080424)
407393.57 3774222.26 0.17899 (05080424)
407374.76 3774176.13 0.18642 (05080424)
407355.95 3774130.01 0.19098 (06082524)
407453.99 3774296.09 0.18111 (05080424)
407449.31 3774342.69 0.17811 (05080124)
407444.63 3774389.28 0.18090 (05080124)
407439.95 3774435.88 0.18094 (05080124)
407435.27 3774482.47 0.17531 (05080124)
407430.59 3774529.06 0.17069 (05080124)
407425.91 3774575.66 0.20536 (07080224)
407380.04 3774644.54 0.19487 (08082924)
407338.86 3774666.82 0.18106 (08082924)
407297.67 3774689.11 0.16246 (08082924)
407256.49 3774711.39 0.15431 (08082924)
407215.30 3774733.68 0.13510 (06080424)
407174.12 3774755.96 0.12190 (06080424)
407132.93 3774778.25 0.11422 (06080424)
407458.67 3774249.50 0.16645 (05080424)
407439.86 3774203.38 0.16506 (05080424)
407421.05 3774157.25 0.17215 (06082524)
407402.24 3774111.13 0.20060 (06082524)
407042.24 3774215.88 0.38686 (05080124)

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDFAULT CONC ELEV

CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
*** THE 1ST HIGHEST 24-HR AVERAGE
INCLUDING SOURCE(S): ONSITE
L0000745 , L0000746 , L0000747 , L0000748 ,
L0000749 , L0000750 , L0000751 , L0000752
L0000753 , L0000754 , L0000755 , L0000756 ,
L0000757 , L0000758 , L0000759 , L0000760
L0000761 , L0000762 , L0000763 , L0000764 ,
L0000765 , L0000766 , L0000767 , L0000768
L0000769 , L0000770 , L0000771 , . . . ,

RECEPTOR POINTS *** ** DISCRETE CARTESIAN

MICROGRAMS/M**3 ** CONC OF PM_10 IN

X-COORD (M) Y-COORD (M) CONC (YMMDDHH)
X-COORD (M) Y-COORD (M) CONC (YMMDDHH)
- - - - -
407062.88 3774171.89 0.35213 (05080424)
407274.53 3773962.02 0.21053 (08081824)
407311.02 3774004.62 0.20919 (08081824)
407347.51 3774047.22 0.20508 (06082524)
407088.29 3774400.55 0.37980 (08082924)
406671.64 3774404.15 0.41800 (06080424)
406528.85 3774261.06 0.80337 (07082624)
406459.65 3774238.75 0.87930 (06082324)
406384.86 3774208.85 1.04711 (09082524)
406321.04 3774185.35 1.38603 (09082524)
406286.00 3774167.61 1.32446 (09082524)
406311.66 3774096.32 2.53331 (09082524)
406314.26 3774050.44 2.53918 (09082524)
406301.92 3773997.64 2.53841 (09082524)
406267.29 3773941.76 1.90245 (09082624)
406210.59 3773872.25 1.02116 (06080824)
406153.17 3773812.46 0.67499 (06080824)
406096.11 3773763.79 0.48912 (06080824)
406096.25 3773666.17 0.38063 (09080724)
406473.90 3773666.71 0.50284 (06081324)
406437.83 3773728.88 0.76529 (06081524)
406402.24 3773774.91 1.22410 (06081524)
406428.82 3773861.75 2.67378 (06082024)
406450.17 3773890.70 2.57946 (06082024)
406530.85 3773873.62 1.26210 (08080924)
406585.42 3773875.04 1.03301 (08080924)
406613.42 3773829.01 0.76892 (08080924)
406684.24 3773790.36 0.56639 (08080924)
406727.77 3773779.99 0.50977 (08080924)
406911.59 3774225.00 0.49424 (05080124)
406942.49 3774255.02 0.45372 (05080124)
406975.43 3774267.87 0.42409 (05080124)
407031.86 3774262.18 0.39297 (05080124)

*** AERMOD - VERSION 14134 *** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDEFAULT CONC ELEV

ANNUAL RESULTS AVERAGED OVER 5 YEARS ***
*** THE SUMMARY OF MAXIMUM

MICROGRAMS/M**3
** CONC OF PM_10 IN

NETWORK GROUP ID (XR, YR, ZELEV, ZHILL, ZFLAG)	AVERAGE CONC OF TYPE GRID-ID	RECEPTOR
ALL 1ST HIGHEST VALUE IS	0.16141 AT (406428.82,	
3773861.75, 99.39, 1877.00,	0.00) DC	
2ND HIGHEST VALUE IS	0.15826 AT (406450.17,	
3773890.70, 98.77, 1877.00,	0.00) DC	
3RD HIGHEST VALUE IS	0.06034 AT (406520.91,	
3773866.66, 98.60, 1877.00,	0.00) DC	
4TH HIGHEST VALUE IS	0.06014 AT (406530.85,	
3773873.62, 97.80, 1877.00,	0.00) DC	
5TH HIGHEST VALUE IS	0.05286 AT (406480.15,	
3773833.24, 103.10, 1877.00,	0.00) DC	
6TH HIGHEST VALUE IS	0.04554 AT (406301.92,	
3773997.64, 98.09, 1877.00,	0.00) DC	
7TH HIGHEST VALUE IS	0.04525 AT (406578.26,	
3773874.23, 96.52, 1877.00,	0.00) DC	
8TH HIGHEST VALUE IS	0.04469 AT (406314.26,	
3774050.44, 97.55, 1877.00,	0.00) DC	
9TH HIGHEST VALUE IS	0.04384 AT (406585.42,	
3773875.04, 96.33, 1877.00,	0.00) DC	
10TH HIGHEST VALUE IS	0.04050 AT (406311.66,	
3774096.32, 98.71, 1877.00,	0.00) DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** AERMOD - VERSION 14134 *** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTs: RegDEFAULT CONC ELEV

HIGHEST 24-HR RESULTS ***
*** THE SUMMARY OF

MICROGRAMS/M**3
** CONC OF PM_10 IN

NETWORK GROUP ID RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	AVERAGE CONC OF TYPE GRID-ID	DATE
ALL HIGH 1ST HIGH VALUE IS	2.67378 ON 06082024: AT (
406428.82, 3773861.75, 99.39, 1877.00,	0.00) DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** AERMOD - VERSION 14134 *** ** Peck Road Spreading Basin
*** 06/18/14
*** AERMET - VERSION 12345 *** ** Diesel PM10 Emissions
*** 13:01:31

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**MODELOPTS: RegDFault CONC ELEV

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 1 Warning Message(s)
A Total of 1062 Informational Message(s)
A Total of 43824 Hours Were Processed
A Total of 0 Calm Hours Identified
A Total of 1062 Missing Hours Identified (2.42 Percent)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
ME W396 1240 MEOPEN: Met data from outdated version of
AERMET, version: 12345

*** AERMOD Finishes Successfully ***

APPENDIX C

CalEEMod Model Annual Printouts

Peck Road Spreading Basin

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.40	User Defined Unit	2.00	400.00	0
Other Asphalt Surfaces	1.00	Acre	1.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2016

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	630.89	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 400 square feet of User Defined Industrial on 2 acres and 1 acre of Other Asphalt Surfaces

Construction Phase - Project schedule provided by applicant

Off-road Equipment - dewatering - four 84-hp pumps operating 12-hours per day.

Off-road Equipment - Paving - 1 cement mixer, 1 paver, 1 roller, 1 loader

Off-road Equipment - Pipeline Construction - 1 concrete saw, 1 excavator, 1 rubber tired loader

Off-road Equipment - Pump station construction - 1 crane, 1 forklift, 1 tractor/loader/backhoe, 1 generator set, and 1 welder

Off-road Equipment - Removal of vegetation - 1 Rubber tired dozer, 1 excavator, 1 crawler tractor, and 1 backhoe

Off-road Equipment - Sediment Removal - 1 excavator, 2 rubber tired loaders, and 1 crawler tractor

Trips and VMT - 6 vendor trips added to the removal of vegetation phase and sediment removal phase to account for the water truck emissions. Haul truck trip length set to 7 miles.

On-road Fugitive Dust - Percent Pavement for Removal of Vegetation and Sediment Removal set to 98% to account for the on-site dirt roads

Grading - 94,000 cubic yards of material exported

Construction Off-road Equipment Mitigation - Mitigation - Water exposed areas 3 times per day

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tbiAreaCoating	Area_Nonresidential_Interior	2100	65940
tbiConstructionPhase	NumDays	220.00	89.00
tbiConstructionPhase	NumDays	6.00	60.00
tbiConstructionPhase	NumDays	10.00	22.00
tbiConstructionPhase	NumDays	3.00	10.00
tbiConstructionPhase	PhaseEndDate	10/30/2015	10/31/2015
tbiGrading	AcresOfGrading	60.00	30.00
tbiGrading	MaterialExported	0.00	94,000.00
tbiLandUse	LandUseSquareFeet	0.00	400.00
tbiLandUse	LandUseSquareFeet	43,560.00	1,000.00
tbiLandUse	LotAcreage	0.00	2.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tbiOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tbiOnRoadDust	HaulingPercentPave	100.00	98.00
tbiOnRoadDust	HaulingPercentPave	100.00	98.00
tbiOnRoadDust	VendorPercentPave	100.00	98.00
tbiOnRoadDust	VendorPercentPave	100.00	98.00
tbiOnRoadDust	WorkerPercentPave	100.00	98.00
tbiOnRoadDust	WorkerPercentPave	100.00	98.00

tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	7.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	23.00	10.00
tblTripsAndVMT	WorkerTripNumber	1.00	18.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr															
2015	0.1871	1.7962	1.2249	2.0100e-003	1.1885	0.0952	1.2837	0.2183	0.0907	0.3090	0.0000	183.2170	183.2170	0.0348	0.0000	183.9482
2016	0.2790	2.7452	2.0296	3.2200e-003	1.2261	0.1303	1.3564	0.2106	0.1216	0.3322	0.0000	292.9688	292.9688	0.0507	0.0000	294.0324
Total	0.4661	4.5414	3.2545	5.2300e-003	2.4146	0.2255	2.6401	0.4289	0.2123	0.6411	0.0000	476.1858	476.1858	0.0855	0.0000	477.9806

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr															
2015	0.1871	1.7962	1.2249	2.0100e-003	1.0486	0.0952	1.1438	0.1464	0.0907	0.2371	0.0000	183.2168	183.2168	0.0348	0.0000	183.9481
2016	0.2790	2.7452	2.0296	3.2200e-003	1.1062	0.1303	1.2365	0.1489	0.1216	0.2705	0.0000	292.9686	292.9686	0.0507	0.0000	294.0322
Total	0.4661	4.5414	3.2545	5.2300e-003	2.1548	0.2255	2.3803	0.2954	0.2123	0.5076	0.0000	476.1854	476.1854	0.0855	0.0000	477.9802

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	10.76	0.00	9.84	31.13	0.00	20.83	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pipeline Construction	Trenching	7/1/2015	9/30/2015	5	66	
2	Paving	Paving	10/1/2015	10/31/2015	5	22	
3	Dewatering of Basin	Trenching	11/1/2015	11/30/2015	5	21	
4	Removal of Vegetation	Site Preparation	12/1/2015	12/14/2015	5	10	
5	Sediment Removal	Grading	12/15/2015	3/7/2016	5	60	
6	Pump Station Construction	Building Construction	3/8/2016	7/8/2016	5	89	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Construction	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Construction	Excavators	1	8.00	162	0.38
Pipeline Construction	Rubber Tired Loaders	1	8.00	199	0.36
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Dewatering of Basin	Pumps	4	12.00	84	0.74
Removal of Vegetation	Crawler Tractors	1	8.00	208	0.43
Removal of Vegetation	Excavators	1	8.00	162	0.38
Removal of Vegetation	Rubber Tired Dozers	1	8.00	255	0.40
Removal of Vegetation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sediment Removal	Crawler Tractors	1	8.00	208	0.43
Sediment Removal	Excavators	1	8.00	162	0.38
Sediment Removal	Rubber Tired Loaders	2	8.00	199	0.36
Pump Station Construction	Cranes	1	7.00	226	0.29
Pump Station Construction	Forklifts	1	8.00	89	0.20
Pump Station Construction	Generator Sets	1	8.00	84	0.74
Pump Station Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Pump Station Construction	Welders	1	8.00	46	0.45
Sediment Removal	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Sediment Removal	Rubber Tired Dozers	1	8.00	255	0.40
Sediment Removal	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pipeline Construction	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dewatering of Basin	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Removal of Vegetation	4	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Sediment Removal	9	10.00	6.00	9,294.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Pump Station Construction	5	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Pipeline Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0542	0.5492	0.3007	5.8000e-004		0.0284	0.0284		0.0271	0.0271	0.0000	53.6245	53.6245	0.0126	0.0000	53.8894
Total	0.0542	0.5492	0.3007	5.8000e-004		0.0284	0.0284		0.0271	0.0271	0.0000	53.6245	53.6245	0.0126	0.0000	53.8894

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2800e-003	1.8600e-003	0.0194	4.0000e-005	2.8900e-003	3.0000e-005	2.9200e-003	7.7000e-004	3.0000e-005	8.0000e-004	0.0000	2.9204	2.9204	1.7000e-004	0.0000	2.9240
Total	1.2800e-003	1.8600e-003	0.0194	4.0000e-005	2.8900e-003	3.0000e-005	2.9200e-003	7.7000e-004	3.0000e-005	8.0000e-004	0.0000	2.9204	2.9204	1.7000e-004	0.0000	2.9240

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr															
	MT/yr															
Off-Road	0.0542	0.5492	0.3007	5.8000e-004		0.0284	0.0284		0.0271	0.0271	0.0000	53.6244	53.6244	0.0126	0.0000	53.8894
Total	0.0542	0.5492	0.3007	5.8000e-004		0.0284	0.0284		0.0271	0.0271	0.0000	53.6244	53.6244	0.0126	0.0000	53.8894

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr															
	MT/yr															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2800e-003	1.8600e-003	0.0194	4.0000e-005	2.8900e-003	3.0000e-005	2.9200e-003	7.7000e-004	3.0000e-005	8.0000e-004	0.0000	2.9204	2.9204	1.7000e-004	0.0000	2.9240
Total	1.2800e-003	1.8600e-003	0.0194	4.0000e-005	2.8900e-003	3.0000e-005	2.9200e-003	7.7000e-004	3.0000e-005	8.0000e-004	0.0000	2.9204	2.9204	1.7000e-004	0.0000	2.9240

3.3 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr															
	MT/yr															
Off-Road	0.0181	0.1926	0.1201	1.8000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	16.7341	16.7341	4.9200e-003	0.0000	16.8375
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0194	0.1926	0.1201	1.8000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	16.7341	16.7341	4.9200e-003	0.0000	16.8375

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0700e-003	1.5500e-003	0.0162	3.0000e-005	2.4100e-003	2.0000e-005	2.4400e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.4337	2.4337	1.4000e-004	0.0000	2.4367
Total	1.0700e-003	1.5500e-003	0.0162	3.0000e-005	2.4100e-003	2.0000e-005	2.4400e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.4337	2.4337	1.4000e-004	0.0000	2.4367

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0181	0.1926	0.1201	1.8000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	16.7341	16.7341	4.9200e-003	0.0000	16.8375
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0194	0.1926	0.1201	1.8000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	16.7341	16.7341	4.9200e-003	0.0000	16.8375

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0700e-003	1.5500e-003	0.0162	3.0000e-005	2.4100e-003	2.0000e-005	2.4400e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.4337	2.4337	1.4000e-004	0.0000	2.4367
Total	1.0700e-003	1.5500e-003	0.0162	3.0000e-005	2.4100e-003	2.0000e-005	2.4400e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.4337	2.4337	1.4000e-004	0.0000	2.4367

3.4 Dewatering of Basin - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0469	0.3344	0.2455	4.1000e-004		0.0251	0.0251		0.0251	0.0251	0.0000	35.6081	35.6081	3.8200e-003	0.0000	35.6884
Total	0.0469	0.3344	0.2455	4.1000e-004		0.0251	0.0251		0.0251	0.0251	0.0000	35.6081	35.6081	3.8200e-003	0.0000	35.6884

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	7.4000e-004	7.7200e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.1615	1.1615	7.0000e-005	0.0000	1.1630
Total	5.1000e-004	7.4000e-004	7.7200e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.1615	1.1615	7.0000e-005	0.0000	1.1630

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0469	0.3344	0.2455	4.1000e-004		0.0251	0.0251		0.0251	0.0251	0.0000	35.6081	35.6081	3.8200e-003	0.0000	35.6884
Total	0.0469	0.3344	0.2455	4.1000e-004		0.0251	0.0251		0.0251	0.0251	0.0000	35.6081	35.6081	3.8200e-003	0.0000	35.6884

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	7.4000e-004	7.7200e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.1615	1.1615	7.0000e-005	0.0000	1.1630
Total	5.1000e-004	7.4000e-004	7.7200e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.1615	1.1615	7.0000e-005	0.0000	1.1630

3.5 Removal of Vegetation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0328	0.0000	0.0328	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0138	0.1619	0.0985	1.3000e-004		7.7700e-003	7.7700e-003	7.1500e-003	7.1500e-003	7.1500e-003	0.0000	11.9115	11.9115	3.5600e-003	0.0000	11.9862
Total	0.0138	0.1619	0.0985	1.3000e-004	0.0328	7.7700e-003	0.0405	0.0168	7.1500e-003	0.0240	0.0000	11.9115	11.9115	3.5600e-003	0.0000	11.9862

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1000e-004	3.1000e-003	3.8500e-003	1.0000e-005	5.7200e-003	5.0000e-005	5.7700e-003	6.0000e-004	5.0000e-005	6.5000e-004	0.0000	0.6038	0.6038	0.0000	0.0000	0.6039
Worker	2.4000e-004	3.5000e-004	3.6800e-003	1.0000e-005	0.0202	1.0000e-005	0.0202	2.1100e-003	1.0000e-005	2.1100e-003	0.0000	0.5531	0.5531	3.0000e-005	0.0000	0.5538
Total	5.5000e-004	3.4500e-003	7.5300e-003	2.0000e-005	0.0259	6.0000e-005	0.0260	2.7100e-003	6.0000e-005	2.7600e-003	0.0000	1.1569	1.1569	3.0000e-005	0.0000	1.1577

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0128	0.0000	0.0128	6.5700e-003	0.0000	6.5700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0138	0.1619	0.0985	1.3000e-004		7.7700e-003	7.7700e-003	7.1500e-003	7.1500e-003	7.1500e-003	0.0000	11.9115	11.9115	3.5600e-003	0.0000	11.9862
Total	0.0138	0.1619	0.0985	1.3000e-004	0.0128	7.7700e-003	0.0206	6.5700e-003	7.1500e-003	0.0137	0.0000	11.9115	11.9115	3.5600e-003	0.0000	11.9862

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1000e-004	3.1000e-003	3.8500e-003	1.0000e-005	5.7200e-003	5.0000e-005	5.7700e-003	6.0000e-004	5.0000e-005	6.5000e-004	0.0000	0.6038	0.6038	0.0000	0.0000	0.6039
Worker	2.4000e-004	3.5000e-004	3.6800e-003	1.0000e-005	0.0202	1.0000e-005	0.0202	2.1100e-003	1.0000e-005	2.1100e-003	0.0000	0.5531	0.5531	3.0000e-005	0.0000	0.5538
Total	5.5000e-004	3.4500e-003	7.5300e-003	2.0000e-005	0.0259	6.0000e-005	0.0260	2.7100e-003	6.0000e-005	2.7600e-003	0.0000	1.1569	1.1569	3.0000e-005	0.0000	1.1577

3.6 Sediment Removal - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1966	0.0000	0.1966	0.1010	0.0000	0.1010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0362	0.4139	0.2163	3.2000e-004		0.0206	0.0206		0.0189	0.0189	0.0000	30.8051	30.8051	9.2000e-003	0.0000	30.9982
Total	0.0362	0.4139	0.2163	3.2000e-004	0.1966	0.0206	0.2171	0.1010	0.0189	0.1200	0.0000	30.8051	30.8051	9.2000e-003	0.0000	30.9982

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr															
	MT/yr															
Hauling	0.0126	0.1321	0.1832	2.8000e-004	0.8930	1.9000e-003	0.8949	0.0925	1.7500e-003	0.0943	0.0000	25.3573	25.3573	2.3000e-004	0.0000	25.3622
Vendor	4.0000e-004	4.0300e-003	5.0100e-003	1.0000e-005	7.4400e-003	6.0000e-005	7.5100e-003	7.9000e-004	6.0000e-005	8.5000e-004	0.0000	0.7849	0.7849	1.0000e-005	0.0000	0.7850
Worker	3.2000e-004	4.6000e-004	4.7800e-003	1.0000e-005	0.0263	1.0000e-005	0.0263	2.7400e-003	1.0000e-005	2.7500e-003	0.0000	0.7190	0.7190	4.0000e-005	0.0000	0.7199
Total	0.0133	0.1366	0.1930	3.0000e-004	0.9268	1.9700e-003	0.9287	0.0960	1.8200e-003	0.0979	0.0000	26.8612	26.8612	2.8000e-004	0.0000	26.8671

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr															
	MT/yr															
Fugitive Dust					0.0767	0.0000	0.0767	0.0394	0.0000	0.0394	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0362	0.4139	0.2163	3.2000e-004		0.0206	0.0206		0.0189	0.0189	0.0000	30.8051	30.8051	9.2000e-003	0.0000	30.9982
Total	0.0362	0.4139	0.2163	3.2000e-004	0.0767	0.0206	0.0972	0.0394	0.0189	0.0583	0.0000	30.8051	30.8051	9.2000e-003	0.0000	30.9982

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr															
	MT/yr															
Hauling	0.0126	0.1321	0.1832	2.8000e-004	0.8930	1.9000e-003	0.8949	0.0925	1.7500e-003	0.0943	0.0000	25.3573	25.3573	2.3000e-004	0.0000	25.3622
Vendor	4.0000e-004	4.0300e-003	5.0100e-003	1.0000e-005	7.4400e-003	6.0000e-005	7.5100e-003	7.9000e-004	6.0000e-005	8.5000e-004	0.0000	0.7849	0.7849	1.0000e-005	0.0000	0.7850
Worker	3.2000e-004	4.6000e-004	4.7800e-003	1.0000e-005	0.0263	1.0000e-005	0.0263	2.7400e-003	1.0000e-005	2.7500e-003	0.0000	0.7190	0.7190	4.0000e-005	0.0000	0.7199
Total	0.0133	0.1366	0.1930	3.0000e-004	0.9268	1.9700e-003	0.9287	0.0960	1.8200e-003	0.0979	0.0000	26.8612	26.8612	2.8000e-004	0.0000	26.8671

3.6 Sediment Removal - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1966	0.0000	0.1966	0.1010	0.0000	0.1010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1262	1.4314	0.7659	1.1700e-003		0.0707	0.0707		0.0650	0.0650	0.0000	110.1516	110.1516	0.0332	0.0000	110.8493
Total	0.1262	1.4314	0.7659	1.1700e-003	0.1966	0.0707	0.2672	0.1010	0.0650	0.1660	0.0000	110.1516	110.1516	0.0332	0.0000	110.8493

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0394	0.4245	0.6178	1.0000e-003	0.8969	5.4200e-003	0.9024	0.0939	4.9800e-003	0.0989	0.0000	90.6545	90.6545	7.6000e-004	0.0000	90.6705
Vendor	1.2700e-003	0.0129	0.0168	3.0000e-005	0.0269	1.9000e-004	0.0271	2.8400e-003	1.8000e-004	3.0200e-003	0.0000	2.8071	2.8071	2.0000e-005	0.0000	2.8075
Worker	1.0300e-003	1.5000e-003	0.0156	3.0000e-005	0.0950	2.0000e-005	0.0951	9.9000e-003	2.0000e-005	9.9200e-003	0.0000	2.5128	2.5128	1.4000e-004	0.0000	2.5158
Total	0.0417	0.4389	0.6502	1.0600e-003	1.0189	5.6300e-003	1.0245	0.1067	5.1800e-003	0.1118	0.0000	95.9744	95.9744	9.2000e-004	0.0000	95.9939

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr															
	MT/yr															
Fugitive Dust					0.0767	0.0000	0.0767	0.0394	0.0000	0.0394	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1262	1.4314	0.7659	1.1700e-003		0.0707	0.0707		0.0650	0.0650	0.0000	110.1514	110.1514	0.0332	0.0000	110.8492
Total	0.1262	1.4314	0.7659	1.1700e-003	0.0767	0.0707	0.1473	0.0394	0.0650	0.1044	0.0000	110.1514	110.1514	0.0332	0.0000	110.8492

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr															
	MT/yr															
Hauling	0.0394	0.4245	0.6178	1.0000e-003	0.8969	5.4200e-003	0.9024	0.0939	4.9800e-003	0.0989	0.0000	90.6545	90.6545	7.6000e-004	0.0000	90.6705
Vendor	1.2700e-003	0.0129	0.0168	3.0000e-005	0.0269	1.9000e-004	0.0271	2.8400e-003	1.8000e-004	3.0200e-003	0.0000	2.8071	2.8071	2.0000e-005	0.0000	2.8075
Worker	1.0300e-003	1.5000e-003	0.0156	3.0000e-005	0.0950	2.0000e-005	0.0951	9.9000e-003	2.0000e-005	9.9200e-003	0.0000	2.5128	2.5128	1.4000e-004	0.0000	2.5158
Total	0.0417	0.4389	0.6502	1.0600e-003	1.0189	5.6300e-003	1.0245	0.1067	5.1800e-003	0.1118	0.0000	95.9744	95.9744	9.2000e-004	0.0000	95.9939

3.7 Pump Station Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr															
	MT/yr															
Off-Road	0.1049	0.8412	0.5233	8.2000e-004		0.0535	0.0535		0.0509	0.0509	0.0000	72.0764	72.0764	0.0160	0.0000	72.4116
Total	0.1049	0.8412	0.5233	8.2000e-004		0.0535	0.0535		0.0509	0.0509	0.0000	72.0764	72.0764	0.0160	0.0000	72.4116

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-003	0.0285	0.0370	7.0000e-005	1.9100e-003	4.3000e-004	2.3400e-003	5.4000e-004	3.9000e-004	9.4000e-004	0.0000	6.2015	6.2015	5.0000e-005	0.0000	6.2024
Worker	3.5000e-003	5.1100e-003	0.0533	1.1000e-004	8.7800e-003	8.0000e-005	8.8600e-003	2.3300e-003	8.0000e-005	2.4100e-003	0.0000	8.5649	8.5649	4.9000e-004	0.0000	8.5751
Total	6.3000e-003	0.0336	0.0903	1.8000e-004	0.0107	5.1000e-004	0.0112	2.8700e-003	4.7000e-004	3.3500e-003	0.0000	14.7664	14.7664	5.4000e-004	0.0000	14.7776

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1049	0.8412	0.5233	8.2000e-004		0.0535	0.0635		0.0509	0.0509	0.0000	72.0763	72.0763	0.0160	0.0000	72.4115
Total	0.1049	0.8412	0.5233	8.2000e-004		0.0535	0.0635		0.0509	0.0509	0.0000	72.0763	72.0763	0.0160	0.0000	72.4115

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										Mt/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-003	0.0285	0.0370	7.0000e-005	1.9100e-003	4.3000e-004	2.3400e-003	5.4000e-004	3.9000e-004	9.4000e-004	0.0000	6.2015	6.2015	5.0000e-005	0.0000	6.2024
Worker	3.5000e-003	5.1100e-003	0.0533	1.1000e-004	8.7800e-003	8.0000e-005	8.8600e-003	2.3300e-003	8.0000e-005	2.4100e-003	0.0000	8.5649	8.5649	4.9000e-004	0.0000	8.5751
Total	6.3000e-003	0.0336	0.0903	1.8000e-004	0.0107	5.1000e-004	0.0112	2.8700e-003	4.7000e-004	3.3500e-003	0.0000	14.7664	14.7664	5.4000e-004	0.0000	14.7776

APPENDIX B – BIOLOGICAL TECHNICAL REPORT



**BIOLOGICAL TECHNICAL REPORT
FOR PECK WATER CONSERVATION IMPROVEMENT PROJECT
CITY OF ARCADIA AND CITY OF IRWINDALE
LOS ANGELES COUNTY, CALIFORNIA**

Prepared for:

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April 2013

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SECTION 1.0 – INTRODUCTION

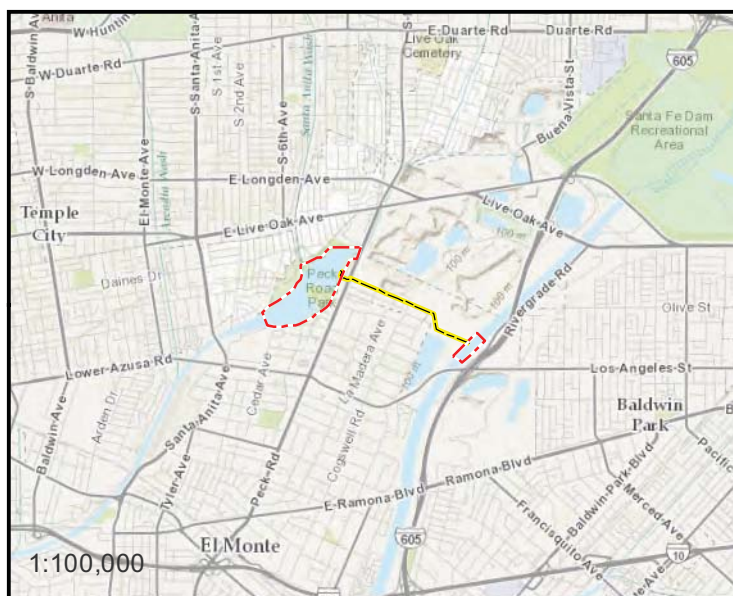
1.1. SURVEY AREA

The Peck Water Conservation Improvement Project is comprised of two sites: the Peck Road Spreading Basin Site and the San Gabriel River Site. The Peck Road Spreading Basin Site is located off of Peck Road and Rio Hondo Parkway. The San Gabriel River Site is located within the channel of the San Gabriel River just north of Lower Azusa Road. The Peck Water Conservation Improvement Project survey sites (“Site”) are located in the Cities of Arcadia and Irwindale, Los Angeles County California, respectively.

The Peck Road Spreading Basin Survey Site consists of a lake feature that spans over three quarter mile in length by a quarter mile wide in a former mining pit. The basin has areas of native riparian scrub and contains a maintained park with trails. The basin is surrounded by a golf course and private residences to the north, private residences to the west and south, and commercial industries to the east. A location and vicinity map of the Peck Road Spreading Basin Site is provided in Figure 1.

The basin is fed by two main channels (Santa Anita Wash and Sawpit Wash) on the north side of the lake, and emerging groundwater. These features are protected under the jurisdiction of the United States Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB) and the California Department of Fish and Wildlife (CDFW).

The San Gabriel River Site is situated in the San Gabriel River channel between the first and second drop structures north of Lower Azusa Road (immediately west of the 605 fwy), approximately 6,500 feet to the southeast of the basin (Please see Figure 1). This area of the San Gabriel River is controlled by the Morris Dam upstream, and is frequently flooded. The San Gabriel River is a Relatively Permanent Waterway (RPW) that flows from the San Gabriel mountains south into the Pacific Ocean; a Traditional Navigable Waterway (TNW). The San Gabriel River is protected under the USACE, RWQCB, and CDFW jurisdictions.



- Limits of Biological Survey
- Project Line



Figure 1
Peck Water Conservation Improvement Project
Project Location and Vicinity Map

Version Date: 12/17/2013

SECTION 2.0 – METHODOLOGY

2.1. LITERATURE REVIEW

Prior to conducting the field survey, existing documentation relevant to the Site was reviewed. The most recent records of the CDFW California Natural Diversity Database (CNDDDB 2013) and the California Native Plant Society's Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California (CNPSEI 2013) were reviewed for the quadrangle containing and surrounding the Site (i.e., *El Monte, Azusa, Baldwin Park and Mount Wilson* USGS 7.5 minute quadrangles). The databases contain records of reported occurrences of federal- or state-listed as endangered or threatened species, proposed endangered or threatened species, California Species of Special Concern (SSC), or otherwise sensitive species or habitats that may occur within or in the vicinity of the Site.

2.2. BIOLOGICAL RECONNAISSANCE SURVEY

A biological reconnaissance survey was conducted on both Sites in order to identify the potential for sensitive species to occur and identify habitats that can support special status species. Chambers Group biologists surveyed the Peck Road Spreading Basin up to the property fence boundaries and the San Gabriel River from the first drop structure to the second drop structure immediately north of Lower Azusa Road in the San Gabriel River (Please see Figure 1). All wildlife and wildlife sign detected, including tracks, scat, carcasses, and vocalizations were recorded. Binoculars were used to scan for wildlife and to survey areas where access was not feasible in order to survey 100 percent cover of the Site. A comprehensive list of wildlife species observed during the survey was recorded and is provided in Appendix A. The Chambers Group botanist walked the Site and recorded observed plants, and mapped vegetation communities including exotics species with a sub-meter Global Positioning System (GPS) unit. The results of the survey were recorded on standardized data sheets. A list of plant species observed during the surveys is provided in Appendix B. Photographs of both Sites were recorded to document existing conditions and are illustrated in Appendix C.

2.3. SENSITIVE WILDLIFE AND PLANT SPECIES

The following information was used to determine the potential for biological resources to occur within the Site. The criteria used to evaluate the potential for sensitive species to occur on the Site are outlined in Table 1. Species occurrences resulting in the CNDDDB and CNPSEI searches were used to analyze potential for species occurrence. Special species status rankings are outlined below.

Special Species Status rankings

Rare Plant Rank (RPR; formally known as CNPS List)

- | | | |
|---------|---|---|
| List 1A | = | Plants presumed extinct in California. |
| List 1B | = | Plants rare and endangered in California and throughout their range. |
| List 2 | = | Plants rare, threatened or endangered in California but more common elsewhere in their range. |
| List 3 | = | Plants about which we need more information; a review list. |
| List 4 | = | Plants of limited distribution; a watch list. |

RPR Extensions

- 0.1 = Seriously endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat).
0.2 = Fairly endangered in California (20 to 80 percent occurrences threatened).
0.3 = Not very endangered in California (less than 20 percent of occurrences threatened).

Federal

- FE = Federally listed; Endangered
FT = Federally listed; Threatened
FC = Federal Candidate for Listing

State

- CDF = California Department of Forestry and Fire Protection
ST = State listed; Threatened
SE = State listed; Endangered
RARE = State-listed; Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
SSC = California Species of Special Concern
WL = CDFW Watch List

**Table 1 Criteria for Evaluating Sensitive Wildlife and Plant Species
Potential for Occurrence (PFO)**

PFO	CRITERIA
Absent:	Species is restricted to habitats or environmental conditions that do not occur within the survey area or no historical records within 3 miles of the survey area.
Low:	Historical records for this species do not exist within the immediate vicinity of the survey area (within 3 miles), and/or habitats or environmental conditions needed to support the species are of poor quality.
Moderate:	Either a historical record exists of the species within the immediate vicinity of the survey area (less than 3 miles) and marginal habitat exists on the survey area, or the habitat requirements or environmental conditions associated with the species occur within the survey area, but no historical records exist within 3 mile of the survey area.
High:	Both a historical record exists of the species within the survey area or its immediate vicinity (less than 1 mile), and the habitat requirements and environmental conditions associated with the species occur within the survey area.
Present:	Species was detected within the survey area at the time of the survey.

Typically, analysis for the potential for sensitive species to occur can be based on a one to five mile buffer radius from the survey area. Due to the survey area being situated within a dense residential/commercial area and the presence of the San Gabriel mountain range within five miles of the sites, the buffer area was identified at three miles. Therefore, species that specifically inhabit higher elevation and mountain habitats (that are not representative of the Site) were excluded from this analysis.

SECTION 3.0 – RESULTS

3.1. LITERATURE REVIEW

According to the CNDDDB literature review, 26 special status plant (or sensitive community) and 9 special status wildlife species were documented to occur within 3 miles of the Sites.

3.2. SURVEY RESULTS

Chambers Group biologists Corey Vane and Heather Clayton conducted the biological resource survey on March 22 and 23, 2013. The surveys were conducted between 9:40 a.m. and 5:00 p.m. During the survey effort, temperatures ranged between 58 and 73 degrees Fahrenheit, winds varied between one and five miles per hour, and cloud cover ranged between 0 and 100 percent with no precipitation.

The Peck Road Spreading Basin Site consists of a lake feature or water basin that spans over three quarter mile in length by a quarter mile wide in a former mining pit. The basin has areas of dense riparian scrub, surrounded by bare ground high along the banks and within a maintained park. The Peck Road Water Conservation Park is used by the public for hiking and fishing, and is composed of trails and non-native vegetation including ornamental trees.

The Sawpit Wash section of the Site (northeast corner) is generally slow moving, with areas of glides and pools, with an earthen bottom and small areas of disturbance. The in-stream vegetation and banks for the majority of the stream inside of the Site consist of dense willows and riparian scrub vegetation. The Santa Anita Wash portion of the Site (north section) consists of tall willow riparian cover, with no water flowing in the wash at the time of the survey. The Santa Anita Wash channel in the Site appears to be earthen with approximately 6 feet deep erosional banks on either side of the wash. However, based on communication with LACDPW, the channel within the site is actually concrete with a heavy accumulation of sediment. Water within the basin exits south of the Site through a concrete spillway from the southwest end of the basin, flows southwestwardly through a channel known as the Rio Hondo, connects with the Los Angeles River (a TNW) and eventually terminates into the Pacific Ocean.

The San Gabriel River Site is situated in the San Gabriel River channel between the first and second drop structures immediately north of Lower Azusa Road, approximately 6,500 feet to the southeast of the basin (Please see Figure 1). The earthen bottom channel consists of disturbed emergent patches of mule fat scrub and low lying native, and a small amount of non-native vegetation and grasses. Water flow within this portion of the river is controlled by dams upstream. No water was flowing in the river at the time of the survey; however, based on historical aerials, it appears this area of the channel is flooded frequently. The channel is surrounded by rip rap barriers with bike lanes on the banks, a nursery to the southeast of the channel, and disturbed native and non-native vegetation to the west of the channel on private property.

Overall, 116 species of plants and 58 species of wildlife were observed on both Sites. No sensitive plant species were observed on area while two sensitive species of wildlife (western pond turtle and osprey) were observed at the Peck Road Spreading Basin Site. Fish species were not observed; however, communication with local anglers revealed that largemouth bass, rainbow trout, common carp and channel catfish are commonly caught in this basin. Based on a personal communication with CDFW, the basin has been stocked with trout (non-native stocked trout) for recreational purposes. A map of the

CNDDDB database occurrences are provided in Figure 2. A comprehensive list of wildlife species observed during the survey was recorded and is provided in Appendix A. A list of plant species observed during the surveys is provided in Appendix B.

Figure 2
Peck Water Conservation
Improvement Project
CNDDB Occurrences Map

Version Date: 12/17/2013

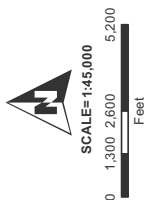
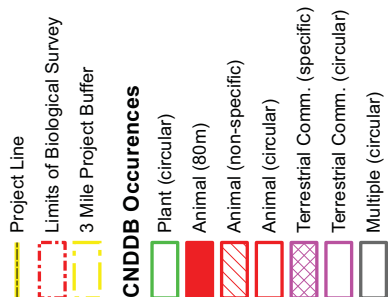
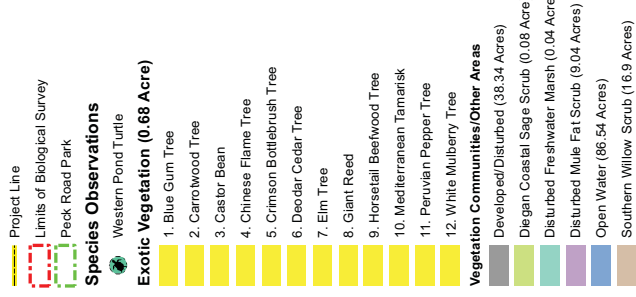
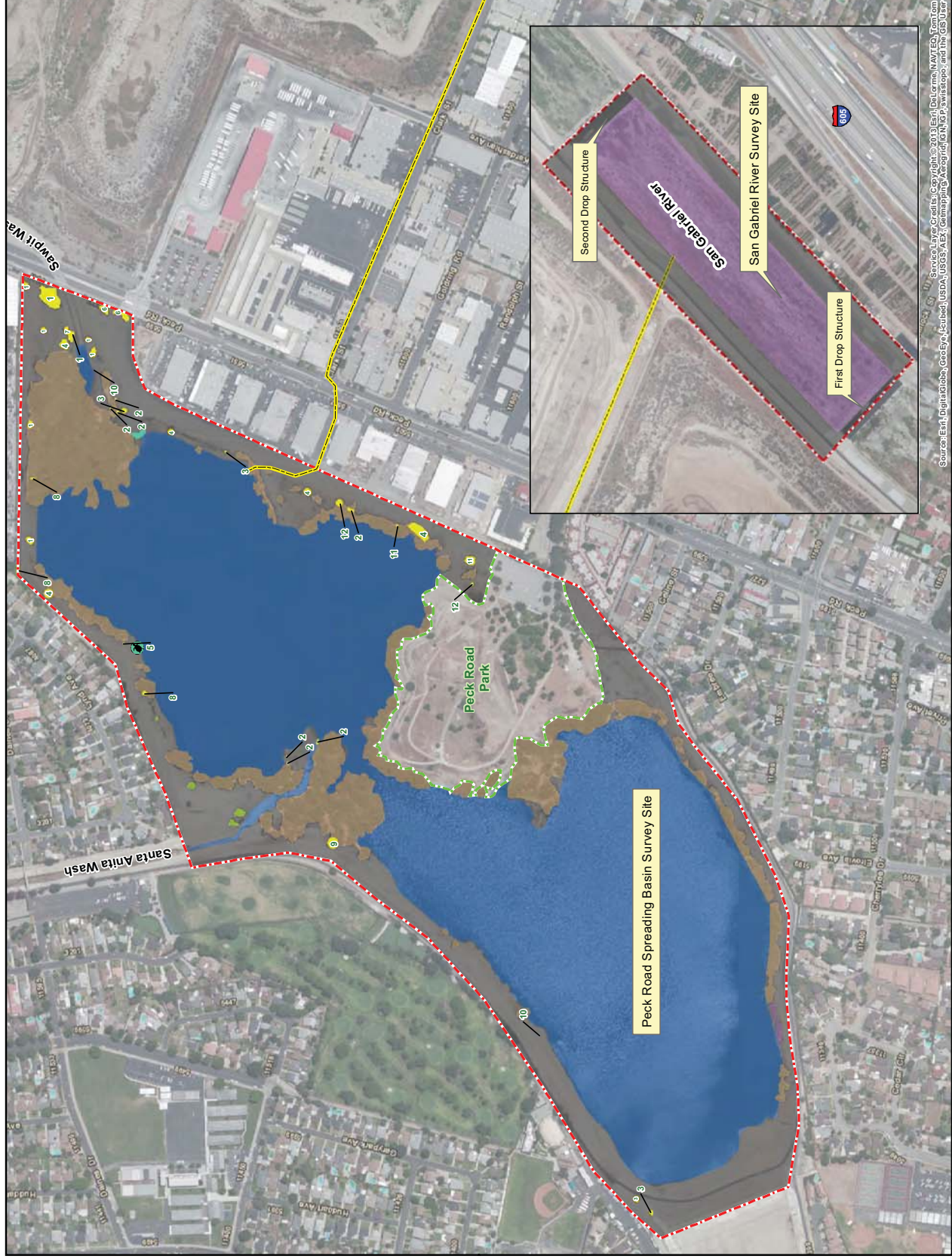
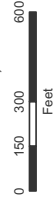


Figure 3
Peck Water Conservation
Improve Project
Biological Survey Results Map

Version Date: 12/17/2013



SCALE= 1:5,000



Source: Esri, DigitalGlobe, GeoEye, USDA, USGS, AeroGRID, IGN, and the GIS User

3.3. PLANT COMMUNITIES

3.3.1 Southern Willow Scrub

Southern Willow Scrub is dominated by willow species (*Salix* spp.) and saplings of riparian forest (Gray and Bramlet 1992). Common dominant species of this community may include: arroyo willow (*Salix lasiolepis*) and narrow-leaf willow (*Salix exigua*) with lesser amounts of mule fat (*Baccharis salicifolia* subsp. *salicifolia*) and black willow (*Salix gooddingii*).

A large area on the northeastern corner of the Peck Road Spreading Basin Site has been mapped as Southern Willow Scrub, with lesser amounts of Southern Willow Scrub scattered along the periphery of area. Plant species found on the Peck Road Spreading Basin Site typical of this vegetation community include: California cottonweed (*Epilobium ciliatum*), velvet ash (*Fraxinus velutina*), western sycamore (*Platanus racemosa*), black willow, narrow-leaf willow, mule fat, and red willow (*Salix laevigata*). There are 16.9 acres of Southern Willow Scrub on the Peck Road Spreading Basin Site.

3.3.2 Disturbed Mule Fat Scrub

Mule Fat Scrub consists of dense stands of mule fat with lesser amounts of willow species. This community usually occupies intermittent streambeds, seeps, and the toe of landslides where seeps develop (Gray and Bramlet 1992). Disturbed Mule Fat Scrub has a large percentage of non-natives found within this community. Species found on the Peck Road Spreading Basin Site typical of this vegetation community include: mule fat, tree tobacco, and narrow-leaf willow. This community is found in a small portion along the southwestern edge of the Peck Road Spreading Basin Site. Disturbed Mule Fat Scrub makes up the majority of the channel within the San Gabriel River Site. There are 9.04 acres of disturbed Mule Fat Scrub.

3.3.3 Diegan Coastal Sage Scrub

Diegan Coastal Sage Scrub is characterized by low soft-woody shrubs up to 1 meter (3.3 feet) in height. Species typical of this community are drought-deciduous and dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*) with laurel sumac (*Malosma laurina*) and white sage (*Salvia apiana*) (Holland 1986). Diegan Coastal Sage Scrub can be found on steep, xeric slopes or clay-rich soils that are slow to release water. Diegan Coastal Sage Scrub is located in small patches on the north eastern portion of Peck Road Spreading Basin Site. Plants observed on area typical of this community include California sagebrush and California buckwheat. There are 0.08 acres of Diegan Coastal Sage Scrub.

3.3.4 Disturbed Freshwater Marsh

Disturbed Freshwater Marsh is described by Holland (1986) as being dominated by perennial, emergent monocot species between 13 to 16 feet in height that often form completely closed canopies. This community is typically dominated by bulrushes (*Scirpus* sp.) and cattails (*Typha* sp.). Disturbed Freshwater Marsh typically lacks a significant current, but is permanently flooded with fresh water, where this prolonged saturation results in deep, peaty soils. This community can be found along the coast, in coastal valleys near river mouths and around the margins of lakes and springs.

Disturbed Freshwater Marsh is present within the northwestern corner of the Peck Road Spreading Basin Site bordering Southern Willow Scrub. Plant species found on the Site typical of this vegetation community include: horseweed (*Erigeron canadensis*), and willow-weed (*Persicaria lapathifolia*). There are 0.04 acres of disturbed Freshwater Marsh on the Peck Road Spreading Basin Site.

3.3.5 Open Water

Open Water often contains a number of phytoplankton species and filamentous blue-green and green algae. In shallow water vascular species including horned pondweed (*Zannichellia palustris*), duckweed fern (*Azolla filiculoides*), and duckweed (*Lemna* sp.) may be found floating on the water surface (Gray and Bramlet 1992). Open Water makes up the majority of the Peck Road Spreading Basin Site and covers 86.54 acres.

3.3.6 Disturbed/Developed

Developed areas are areas that have been altered by humans and now display man-made structures such as houses, paved roads, buildings, parks, and other maintained areas. Disturbed areas are mostly devoid of vegetation due to recent disturbances. The small amount of vegetation that begins to reclaim the soil is dominated by non-native, weedy species adapted to frequent disturbance. Species found on the Peck Road Spreading Basin Site typical of this community include: flax-leaved horseweed (*Erigeron bonariensis*), horseweed, western marsh cudweed (*Gnaphalium palustre*), telegraph weed (*Heterotheca grandiflora*), prickly lettuce (*Lactuca serriola*), cheeseweed (*Malva parviflora*), everlasting cudweed (*Pseudognaphalium luteoalbum*), and common groundsel (*Senecio vulgaris*). Areas within the Peck Road Spreading Basin Site and the San Gabriel River Site that are made up of Disturbed/Developed include upper slopes of the basins. Disturbed/Developed areas are 38.34 acres of both Sites. In addition, Peck Road Water Conservation Park is identified as a Developed area, and consists of an additional 15.16 acres within the Peck Road Spreading Basin Site.

3.3.7 Invasive Exotic Vegetation

Exotic Vegetation consists of areas where the vegetation is dominated by non-native horticultural plants used for landscaping that were not originally planted but may have been located nearby and have escaped to colonize the Site (Gray and Bramlet 1992). Typically, the species composition consists of introduced trees, shrubs, flowers and turf grass.

Large patches of exotic vegetation have been mapped throughout the Peck Road Spreading Basin Site. Smaller patches of scattered castor bean (*Ricinus communis*), exotic palm saplings, short-pod mustard, and passion fruit, and giant reed (*Arundo donax*) were also present within the Southern Willow Scrub community and have not been mapped (primarily isolated individuals). Plant species found on the Site within this community include: crimson bottlebrush tree (*Callistemon citrinus*), deodar cedar tree (*Cedrus deodara*), carrotwood tree (*Cupaniopsis anacardioides*), blue gum tree (*Eucalyptus globules*), Chinese flame tree (*Koelreuteria bipinnata*), white mulberry tree (*Morus alba*), allepo pine (*Pinus halepensis*), castor bean, Peruvian pepper tree (*Schinus molle*), and Mediterranean tamarisk (*Tamarix ramosissima*). There are 0.68 acres of Exotic Vegetation on the Peck Road Spreading Basin Site.

3.4. SENSITIVE PLANT SPECIES

3.4.1 Peck Road Spreading Basin Site

The following 16 special status species is considered to be **Absent** from the Peck Road Spreading Basin Site due to the lack of suitable habitat or the species are found outside the elevation range of the Site.

- San Gabriel manzanita (*Arctostaphylos glandulosa* ssp. *gabrielensis*) – CRPR List 1B.2;
- Braunton's milk-vetch (*Astragalus brauntonii*) – FE, CRPR List 1B.2;
- slender mariposa lily (*Calochortus clavatus* var. *gracilis*) – CRPR List 1B.2;
- Plummer's mariposa lily (*Calochortus plummerae*) – CRPR List 4.2;
- intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) – CRPR List 1B.2;
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) – CRPR List 1B.1;
- slender-horned spineflower (*Dodecahema leptoceras*) – FE, CE, CRPR List 1B.1;
- San Gabriel River dudleya (*Dudleya cymosa* ssp. *crebrifolia*) – CRPR List 1B.2;
- San Gabriel Mountains dudleya (*Dudleya densiflora*) – CRPR List 1B.1;
- San Gabriel bedstraw (*Galium grande*) – CRPR List 1B.2;
- mesa horkelia (*Horkelia cuneata* var. *puberula*) – CRPR List 1B.1;
- Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) – CRPR List 1B.2;
- San Gabriel linanthus (*Linanthus concinnus*) – CRPR List 1B.2;
- Rock Creek broomrape (*Orobanche valida* ssp. *valida*) – CRPR List 1B.2;
- Brand's star phacelia (*Phacelia stellaris*) – FC, CRPR List 1B.1; and
- Parish's gooseberry (*Ribes divaricatum* var. *parishii*) – CRPR List 1A

The following 7 special status plant species have a **Low** potential to occur on the Peck Road Spreading Basin Site due to the presence of low quality suitable habitat; however, there are no historical occurrences within a 3 mile radius of the Site.

Nevin's barberry (*Berberis nevinii*) – FE, CE, CRPR List 1B.1

Nevin's barberry is a federal- and state-listed endangered and CRPR List 1B species. This perennial evergreen shrub flowers from March to June. This species is known to occur on sandy gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub at elevations between 900 feet and 2,600 feet above mean sea level (amsl). Many historical occurrences have been extirpated. Nevin's barberry is threatened by alteration of fire regimes, development, and road maintenance. Other threats to this species may include: illegal dumping, fire suppression, and off highway vehicles (OHV).

Marginal suitable habitat is located on the eastern portion of the Peck Road Spreading Basin Site within the Southern Willow Scrub habitat. There are no historical occurrences of this species found within 3 miles of the Site.

southern tarplant (*Centromadia parryi* ssp. *australis*) – CRPR List 1B.1

Southern tarplant is a CRPR List 1B species. This annual herb flowers from May to November. This species is known to occur on the margins of marshes and swamps, in vernal mesic areas of valley and foothill grasslands, and vernal pools at elevations up to 1,394 feet amsl. Threats to

southern tarplant include: urbanization, vehicles, development, foot traffic, grazing, habitat disturbance, and competition from non-native plants.

Marginal suitable habitat is located in a small portion of Disturbed Freshwater Marsh on the north eastern portion of the Peck Road Spreading Basin Site. There are no historical occurrences of this species found within 3 miles of the Site.

California satintail (*Imperata brevifolia*) – CRPR List 2.1

California satintail is a CRPR List 2 species. This perennial rhizomatous herb flowers from September to May. This species is known to occur in mesic areas of chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps, and riparian scrub at elevations up to 4,000 feet amsl. Threats to California satintail include: development and agriculture.

Marginal suitable habitat is located in a small portion of Disturbed Freshwater Marsh on the north eastern portion and the eastern portion of the Peck Road Spreading Basin Site within Southern Willow Scrub habitat. There are no historical occurrences of this species found within 3 miles of the Site.

California muhly (*Muhlenbergia californica*) – CRPR List 4.3

California muhly is a CRPR List 4 species. This perennial rhizomatous herb flowers from June to September. This species is known to occur in mesic areas of streambanks of chaparral, coastal scrub, lower montane coniferous forests, and meadows and seeps at elevations between 328 to 6,561 feet amsl. Threats to California muhly include: recreational activities and water diversion.

Marginal suitable habitat is located in a small portion of Disturbed Freshwater Marsh on the north eastern portion of the Peck Road Spreading Basin Site. There are no historical occurrences of this species found within 3 miles of the Site.

white rabbit-tobacco (*Pseudognaphalium leucocephalum*) – CRPR List 2.2

White rabbit-tobacco is a CRPR List 2 species. This perennial herb flowers from July to December. This species is known to occur in sandy gravelly areas of chaparral, cismontane woodland, coastal scrub and riparian woodland at elevations up to 7,000 feet amsl. Threats to white rabbit-tobacco include development.

Marginal suitable habitat is located on the eastern portion of the Peck Road Spreading Basin Site within the Southern Willow Scrub habitat. There are no historical occurrences of this species found within 3 miles of the Site.

Greata's aster (*Aster greatae*) – CRPR List 1B.3

Greata's aster is a CRPR List 1B species. This perennial rhizomatous herb flowers from June to October. This species is known to occur in mesic areas of broadleaf upland forests, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland at elevations between 1,000 and 6,600 feet amsl. Threats to Greata's aster include: recreational activities, trail maintenance, and non-native plants.

Marginal suitable habitat is located on the eastern portion of the Peck Road Spreading Basin Site within the Southern Willow Scrub habitat. There are no historical occurrences of this species found within 3 miles of the Site.

Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*) – CRPR List 2.2

Sonoran maiden fern is a CRPR List 2. This perennial rhizomatous herb flowers from January to September. This species is known to occur near meadows, seeps and streams at elevations between 164 to 2,000 feet amsl. Threats to sonoran maiden fern include: foot traffic and recreational activities.

Marginal suitable habitat is located in a small portion of Disturbed Freshwater Marsh on the north eastern portion of the Peck Road Spreading Basin Site. There are no historical occurrences of this species found within 3 miles of the Site.

The following 3 special plant wildlife species have a **Moderate** potential to occur on the Peck Road Spreading Basin Site due to the presence of moderate quality suitable habitat and historical records of the species occurring within 3 miles of the Site:

California sawgrass (*Cladium californicum*) – CRPR List 2.2

California sawgrass is a CRPR List 2 species. This perennial rhizomatous herb flowers from June to September. This species is known to occur in meadows and seeps and alkaline or freshwater marshes and swamps at elevations between 200 and 2,865 feet amsl. This species is known from only 20 historical occurrences.

Marginal suitable habitat is located in a small portion of Disturbed Freshwater Marsh on the north eastern portion of the Peck Road Spreading Basin Site. Historical records show this species occurs within 3 miles of the Site, to the north at the mouth of the Santa Anita Canyon in Monrovia. However, this occurrence was documented in 1861.

Peruvian dodder (*Cuscuta obtusiflora* Kunth var. *glandulosa*) – CRPR List 2.2

Peruvian dodder is a CRPR List 2 species. This parasitic annual vine flowers from July to October. This species is known to occur in freshwater marshes and swamps at elevations between 50 to 918 feet amsl.

Marginal suitable habitat is located in a small portion of Disturbed Freshwater Marsh on the north eastern portion of the Peck Road Spreading Basin Site. Historical records show this species occurs within 3 miles of the Site in El Monte. However, this record is presumed to be documented over 70 years ago (no date on the CNDDDB).

southern mountains skullcap (*Scutellaria bolanderi* ssp. *austromontana*) – CRPR List 1B.2

Southern mountains skullcap is a CRPR List 1B species. This perennial rhizomatous herb flowers from June to August. This species is known to occur in mesic sites of chaparral, cismontane woodlands, and lower montane coniferous forests at elevations between 1,400 and 6,561 feet amsl. Threats to this species include: grazing and recreational activities.

Marginal suitable habitat is located on the eastern portion of the Peck Road Spreading Basin Site within the Southern Willow Scrub habitat. Historical records show this species is found within 3 miles of the Site in El Monte. However, this record is presumed to be documented over 70 years ago (no date on the CNDDDB).

3.4.2 San Gabriel River Site

The following 25 special status species are considered to be **Absent** from the San Gabriel River Site due to the lack of suitable habitat or the species are found outside the elevation range of the Site.

- San Gabriel manzanita – CRPR List 1B.2;
- Braunton's milk-vetch – FE, CRPR List 1B.2;
- Nevin's barberry (*Berberis nevinii*) – FE, CE, CRPR List 1B.1;
- slender mariposa lily – CRPR List 1B.2;
- Plummer's mariposa lily – CRPR List 4.2;
- intermediate mariposa lily – CRPR List 1B.2;
- southern tarplant (*Centromadia parryi* ssp. *australis*) – CRPR List 1B.1;
- Parry's spineflower – CRPR List 1B.1;
- California sawgrass (*Cladium californicum*) – CRPR List 2.2;
- Peruvian dodder (*Cuscuta obtusiflora* Kunth var. *glandulosa*) – CRPR List 2.2
- slender-horned spineflower – FE, CE, CRPR List 1B.1;
- San Gabriel River dudleya – CRPR List 1B.2;
- San Gabriel Mountains dudleya – CRPR List 1B.1;
- San Gabriel bedstraw – CRPR List 1B.2;
- mesa horkelia – CRPR List 1B.1;
- Robinson's pepper-grass – CRPR List 1B.2;
- San Gabriel linanthus – CRPR List 1B.2;
- California muhly (*Muhlenbergia californica*) – CRPR List 4.3;
- Rock Creek broomrape – CRPR List 1B.2;
- Brand's star phacelia – FC, CRPR List 1B.1;
- white rabbit-tobacco (*Pseudognaphalium leucocephalum*) – CRPR List 2.2
- Parish's gooseberry – CRPR List 1A;
- southern mountains skullcap (*Scutellaria bolanderi* ssp. *austromontana*) – CRPR List 1B.2
- Greata's aster (*Symphotrichum greatae*) – CRPR List 1B.3; and
- Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*) – CRPR List 2.2

The following special status plant species has a **Low** potential to occur on the San Gabriel River Site due to the presence of low quality suitable habitat; however, there are no historical occurrences within a 3 mile radius of the Site.

California satintail (*Imperata brevifolia*) – CRPR List 2.1

California satintail is a CRPR List 2 species. This perennial rhizomatous herb flowers from September to May. This species is known to occur in mesic areas of chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps, and riparian scrub at elevations up to 4,000 feet amsl. Threats to California satintail include: development and agriculture.

Marginal suitable habitat is located in the Disturbed Mule Fat Scrub within the San Gabriel River Site. There are no historical occurrences of this species found within 3 miles of the Site. Frequent scouring events further limit the potential for this species to occur within the Site.

3.5. SENSITIVE WILDLIFE SPECIES

3.5.1 Peck Road Spreading Basin Site

The following 1 special status species is considered to be **Absent** from the Peck Road Spreading Basin Site due to the lack of suitable habitat.

- coastal California gnatcatcher (*Poliophtila californica californica*) -FT, SSC

The following 3 special status wildlife species have a **Low** potential to occur on the Peck Road Spreading Basin Site due to the presence of low quality suitable habitat.

- pallid Bat (*Antrozous pallidus*); foraging only -SSC
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) -SSC
- western yellow-billed cuckoo only (*Coccyzus americanus occidentalis*) -FC, SE

The following 4 special status wildlife species have a **Moderate** potential to occur on the Peck Road Spreading Basin Site due to the presence of moderate quality suitable habitat and historical records of the species occurring within 3 miles of the Site.

coast horned lizard (*Phrynosoma blainvillii*) – CDFW SSC

The coast horned lizard (*Phrynosoma blainvillii*) is a SSC. It is found along the Pacific coast of California on the western side of the Sierra Mountains to the Baja peninsula area in Mexico. Adults are approximately two to four inches in snout to vent length with numerous elongated and pointed scales or spines on the dorsal side. Two rows of enlarged scales are also present along the flank. This species is brown, yellowish, reddish, or gray with several dark bands that cross the back with highlighted white areas along the rear of the bands (Sherbrooke 2003). This species is found in many habitats, including oak woodlands, chaparral, coastal sage scrub, grasslands, valleys, foothills, riparian wetlands, conifer forests, and semiarid mountains up to 8,000 feet amsl. It inhabits sandy washes or areas with loose, fine, sandy soils for burying, and low brush for cover and open areas for basking. It feeds primarily on harvester ants and other native ant species. Populations of this species have been reduced due to development, agriculture, and the introduction of Argentine ants that heavily compete with native ant species (Stebbins 2003).

Habitat exists in several areas of the Peck Road Spreading Basin Site for coast horned lizards. The Site has open canopy areas with sand and riparian vegetation that allow for adequate cover. The Site also had several different species of ants suitable for foraging. CNDDDB records indicate that the species was found within 1 mile of the Site as recently as 2001. This species has a moderate potential to occur on the Site.

Cooper's hawk (*Accipiter cooperii*) – CDFW WL

The Cooper's hawk (nesting) is a CDFW WL species. This species occurs as a migrant and/or resident over most of the United States from southern Canada to northern Mexico. It is similar in appearance to the sharp-shinned hawk (*Accipiter striatus*), but is distinguished by its larger size, more rounded tail, and darker crown. Favored habitats include open woodlands, mature forests, woodland edges, and river groves. More recently, the Cooper's hawk has been known to breed in suburban and urban areas with tree structure similar to native habitats. This medium-sized (14 to 20 inches) hawk is well-adapted for hunting birds as prey with its long tail and short, rounded wings; these features allow maneuverability while in pursuit and on the ambush. In addition to birds, it may also take amphibians, reptiles, and small mammals as supplemental prey items. Historic population losses resulted from the widespread use of DDT (dichlorodiphenyltrichloroethane). Other threats include habitat loss and illegal hunting (Remsen 1978).

Cooper's hawks (nesting) are found in a variety of habitats. Due to the favorable habitat, including foraging areas and the presence of tall trees that allow for adequate nesting habitat, this species has a moderate potential to nest (high potential to forage) on the Peck Road Spreading Basin Site. CNDDDB records indicate that this species was detected 2 to 5 miles from the Site as recently as 2001.

least Bell's vireo (*Vireo bellii pusillus*) – FE, SE

The least Bell's vireo (nesting) is a federal- and state-listed endangered subspecies of the Bell's vireo. This small passerine subspecies has a breeding range that is restricted to lower elevations of coastal California and northwestern Baja California, Mexico, with a few inland populations (Franzreb 1989); its winter range extends into southern Baja California, Mexico (R. Hutto, pers. comm., cited in Franzreb 1989). This bird is approximately 4.3 to 4.7 inches in length, with an overall drab appearance (brownish grey upperparts and a whitish underside), and a faint white eye-ring; it is most easily identified by its unique song. The least Bell's vireo typically nests in willows (*Salix* spp.) and other riparian trees/shrubs (typically three to six feet above the ground). This species requires densely vegetated riparian habitat along streams and rivers during the spring and summer months to breed, foraging in habitat adjacent to its nesting territory, which is typically riparian or chaparral (Gray and Greaves 1984; Franzreb 1989; USFWS 1994); least Bell's vireos forage by gleaning insects from the leaves of trees and shrubs. The two major threats and subsequent factors in the decline of least Bell's vireo populations are loss of riparian habitat from urban and agricultural development, overgrazing, flood control projects, logging operations, and nest parasitism by the brown headed-cowbird (*Molothrus ater*) (Franzreb 1989; CBD 2011). Despite historic least Bell's vireo population losses (followed by federal protection in the 1980's), recent trends indicate that populations are increasing, with populations returning to parts of their former range and colonizing some new areas (USFWS 1998).

The dense riparian stand on the northeast corner of the Site provides quality foraging and nesting habitat for the vireo. An earthen flowing channel passing through a section of a storied riparian zone allows for a moderate potential for the species to occur on the Peck Road Spreading Basin Site. According to the results of the CNDDDB search, the species was found within 1 to 5 miles of the Site as recently as 2011.

yellow-breasted chat (*Icteria virens*) – CDFW SSC

The yellow-breasted chat (nesting) is a SSC. The breeding range of this species includes most of the U.S., south-central Canada, and northern Mexico. It winters from the southern U.S. to Panama. In Southern California, the population is very locally distributed throughout the Coast and Peninsular ranges. The yellow-breasted chat is the largest wood warbler. The upperparts from forehead to upper tail-coverts are olive green, becoming slightly grayer on lower rump, with a white supercilium, lower eye-lid also bordered by white crescent, and the underparts are a bright yellow (Eckerle and Thompson 2001). Habitats include swamplands, riparian willow thickets and other dense brush, often near watercourses. The yellow-breasted chat feeds on insects, larvae, spiders, berries, and fruits (Green, 2005). It mimics songs (often at night), sports an impressive array of sounds, and is often conspicuous within its territory early in the breeding season. It has a characteristic display flight whereupon it takes off from a perch, jumbles through the air, and sings all the while. Predators include snakes, accipiters, and small mammals. Population declines are due to the loss and degradation of riparian habitats rangewide. The decline is also due to parasitism by the brown-headed cowbird.

The dense stand of riparian growth at the northeast corner of the Site and the northern side of the Site near the Sawpit and Santa Anita Washes provides for quality foraging and nesting habitat for the chat. CNDDDB records indicate that species was found within 2 to 5 miles of the Peck Road Spreading Basin Site as recently as 2001. This species has a moderate potential to occur on the Site.

The following two special status wildlife species were **Present** on the Peck Road Spreading Basin Site.

western pond turtle (*Actinemys marmorata pallida*) – SSC

The western pond turtle (WPT) is a SCC. WPT are relatively small turtles less than 22 cm with an olive brown, dark brown, or grayish carapace that may exhibit a pattern of lines or spots. The plastron is generally a pale yellow and may have dark blotches along the rear margins of the scutes. The skin is grayish with some pale yellow on the neck, chin, forelimbs and tail (California Reptiles and Amphibians 2012). This species inhabits ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches that host abundant vegetation with either rocky or muddy bottoms. In the stream habitats, WPT are found in areas that host pools with logs, rocks, cattail mats or exposed banks for basking in the sun. They eat a variety of foods including crustaceans, insects, fish, frogs, plants, and snails, and are generally active from February to November. This species will hibernate in the winter under water and aestivate during the hot summer months in the muddy bottom of pools or move onto land to hibernate under dense brush. Mating occurs in April and May, and nesting occurs between April and August. Females will deposit eggs in a vegetated upland location that may be a considerable distance (400 m or more) from the aquatic habitat to the nest. Eggs are generally deposited in grassy upland areas adjacent to streams during May and June on south facing slopes, although some individuals may deposit eggs as early as April and as late as August.

A WPT was identified on the Peck Road Spreading Basin Site on the north bank (south facing slope) of the basin at GPS point Zone 11 406593, 3774248 (UTM NAD 83). The WPT was

observed basking and digging with both hind legs near the water close to riparian vegetation. The WPT fled for cover once it detected the biologist's presence, a typical response for such a timid species. In addition, over 30 red-eared sliders were found throughout the basin. The basin has ample areas for turtles to forage, bask, nest and hide in cover on the north and east sections of the basin. Unlike red-eared sliders, WPT are highly skittish of human presence and will flee for cover quickly once human presence is detected. During the survey, several splashes were heard, suggesting that several more WPT may inhabit the basin area. This species is considered present within the Peck Road Spreading Basin Site. Please see Figure 3 for a map of the exact location of the turtle and Appendix C for site photos.

osprey (*Pandion haliaetus*) – CDFW WL

The osprey is a WL and a California Department of Forestry and Fire Protection (CDF) sensitive species. Although this species may breed in many areas of its summer range, it breeds primarily from the northern United States up through Canada and into Alaska. Most of the North American population winters south of the U.S. in Central and South America, as well as along the Pacific and Caribbean coasts of Mexico. Wintering grounds also include coastal California and southeastern California. The osprey is a large raptor with a white belly and chest and black back and wings. Its forehead and crown are white with a thick black eyestripe that extends down onto the back. This raptor species forages primarily on fish and is strongly associated with open water throughout its range. It builds a large nest of twigs, sticks, moss, and other materials high on a tree or artificial structure, and may use it for several seasons. Osprey populations have increased greatly since the ban of agricultural DDT, although shooting, electrocution at power lines, and habitat degradation still pose threats to populations (Cornell Lab of Ornithology, 2012).

Although the osprey was not found in the CNDDDB records findings, the osprey was observed on the Peck Road Spreading Basin Site during the survey. The osprey was observed foraging over the water most likely in search of fish. The osprey is protected while nesting and will typically nest in the same location every year; however, no osprey nests were identified.

3.5.2 San Gabriel River Site

The following 2 special status species are considered to be **Absent** from the San Gabriel River Site due to the lack of suitable habitat.

- coastal California gnatcatcher -FT, SSC
- yellow-breasted chat -SSC

The following 6 special status wildlife species have a **Low** potential to occur on the San Gabriel River Site due to the presence of low quality suitable habitat.

- Cooper's hawk; foraging only -WL
- least Bell's vireo; foraging only -FE, SE
- pallid bat; foraging only -SSC
- San Diego black-tailed jackrabbit – SSC
- western pond turtle – SSC

- western yellow-billed cuckoo; foraging -FC, SE

SECTION 4.0 – CONCLUSIONS

4.1. SPECIAL STATUS PLANT SPECIES

4.1.1 Peck Road Spreading Basin Site

The Peck Road Spreading Basin Site has marginal suitable habitat to support 10 sensitive plant species out of the 26 sensitive species known to occur within the vicinity of the Site. Three out of the ten sensitive species have a moderate potential to occur on the Site within the marginal suitable habitat located on the eastern and north eastern portion of the Site. Historical records show that California sawgrass, Peruvian dodder and southern mountains skullcap have been known to occur within 3 miles of the Site. Seven of these species have no historical occurrences within 3 miles of the Site but have a low potential to occur near the eastern portion of the Site within Southern Willow Riparian Scrub habitat and the north eastern portion of the Site within the Disturbed Freshwater Marsh. Nevin's barberry is the only federal- and state-listed endangered species with a low potential to occur onsite. Southern tarplant and Greata's aster are CRPR List 1B species that have a low potential to occur onsite. California satintail, white rabbit-tobacco, sand Sonoran maiden fern are CRPR List 2 species that have a low potential to occur onsite. California muhly is a CRPR List 4 species that has a low potential to occur onsite. CEQA guidelines specify that focused plant surveys are required for all sensitive plants with federal-and state-listings, CRPR List 1B and CRPR List 2 species. Surveys are not required for CRPR List 3 or 4 species

4.1.2 San Gabriel River Site

The San Gabriel River Site is made up of Disturbed Mule Fat Scrub with minor elements of alluvial fan sage scrub habitat. This Site is subject to frequent scouring events. As a result, many species that have been known to occur in riparian scrub habitat and alluvial scrub habitat have no potential to occur onsite. California satintail, a CRPR List 2 species, has a low potential to occur onsite. CEQA guidelines specify that focused plant surveys are required for all sensitive plants with federal-and state-listings, CRPR List 1B and CRPR List 2 species.

Table 2 Focused Plant Surveys Timing

Species	Blooming Period (when to survey)
Nevin's barberry	March – June
southern tarplant	May – November
California sawgrass	June – September
Peruvian dodder	July – October
California satintail	September – May
California muhly*	June – September
white rabbit-tobacco	July – December
southern mountains skullcap	June – August
Greata's aster	June – October
Sonoran maiden fern	January – September
Note: * surveys not required	

4.2. SPECIAL STATUS WILDLIFE SPECIES

4.2.1 coast horned lizard

There is a moderate potential for coast horned lizards to occur on Sites. Suitable habitat for this species exists in several areas of the Peck Road Spreading Basin Site and within the San Gabriel River Site. Both Sites have open lands with sand and riparian vegetation that allow for adequate cover, and ants that allow for suitable foraging. Currently, there is no protocol-level survey methodology for this species.

4.2.2 Cooper's hawk

Cooper's hawks (nesting) are found in a variety of habitats. Due to the habitat at the Peck Road Spreading Basin Site which includes tall trees that allow for nesting and an abundant food source, this species has a moderate potential to nest (high potential to forage) on the Site. This species has a low potential to occur on the San Gabriel River Site.

4.2.3 least Bell's vireo

The dense riparian stand on the northeast corner of the Peck Road Spreading Basin Site that is fed by Sawpit Wash provides quality foraging and nesting habitat for the vireo. The dense, storied riparian zone allows for a moderate potential for the species to occur on the Peck Road Spreading Basin Site.

This species has a low potential to forage within the San Gabriel River Site. USFWS protocol for this species is 8 surveys conducted between April 10 and July 31, spaced at least 10 days apart.

4.2.4 yellow breasted chat

The inlets of the Sawpit and Santa Anita Washes provide for quality foraging and nesting habitat for the chat. The dense stand of riparian growth at both of the river inlets allow for this species to have a moderate potential to occur on the Peck Spreading Road Basin Site. Suitable habitat for this species does not exist within the San Gabriel Site.

4.2.5 western pond turtle

One WPT was identified on the Peck Road Spreading Basin Site on the north bank (south facing slope) of the basin. The WPT was observed basking and digging with both hind legs near the water close to riparian vegetation. The basin has ample areas for turtles to forage, bask, nest and hide in cover on the north and east sections of the basin. Although this species is not listed as state threatened or endangered, CDFW requires coordination regarding surveys for this species.

4.2.6 osprey

One osprey was observed foraging over the water of Peck Road Spreading Basin in search of fish. The Site has a lake feature (approximately 3/4 mile long by 1/4 mile wide) with assumed fish species including largemouth bass, rainbow trout, common carp and channel catfish to prey on. None of these fish were observed during the survey, all fish information was provided through local anglers. Numerous large trees around the basin allow for quality nesting habitat; however, no nests were identified during the survey. This species is considered present within the Peck Road Spreading Basin Site.

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APPENDIX A – WILDLIFE SPECIES LIST



**Appendix A:
Wildlife Species Observed**

Scientific Name	Common Name
CLASS REPTILIA	REPTILES
EMYDIDAE	BOX AND WATER TURTLES
<i>Actinemys marmorata pallida</i>	southwestern pond turtle
<i>Trachemys scripta elegans</i>	red-eared slider
PHRYNOSOMATIDAE	ZEBRA-TAILED, EARLESS, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNY LIZARDS
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Uta stansburiana</i>	side-blotched lizard
CLASS AVES	BIRDS
PODICIPEDIDAE	GREBES
<i>Aechmophorus occidentalis</i>	western grebe
<i>Podiceps nigricollis</i>	eared grebe
PHALACROCORACIDAE	CORMORANTS
<i>Phalacrocorax auritus</i>	double-crested cormorant
ARDEIDAE	HERONS, BITTERNS
<i>Ardea herodias</i>	great blue heron
<i>Egretta thula</i>	snowy egret
ANATIDAE	DUCKS, GEESE, SWANS
<i>Anas clypeata</i>	Northern shoveler
<i>Anas cyanoptera</i>	Cinnamon teal
<i>Anas platyrhynchos</i>	Mallard
<i>Anas platyrhynchos</i>	Domestic mallard
<i>Aythya sp.</i>	scaup
<i>Aythya collaris</i>	ring-necked duck
<i>Branta canadensis</i>	Canada goose
<i>Bucephala albeola</i>	Bufflehead
<i>Cairina moschata</i>	Muscovy duck
<i>Oxyura jamaicensis</i>	ruddy duck
CATHARTIDAE	NEW WORLD VULTURES
<i>Cathartes aura</i>	turkey vulture
ACCIPITRIDAE	HAWKS, KITES, EAGLES
<i>Buteo jamaicensis</i>	red-tailed hawk
PANDIONIDAE	OSPREYS
<i>Pandion haliaetus</i>	Osprey
RALLIDAE	RAILS, GALLINULES, COOTS
<i>Fulica americana</i>	American coot
CHARADRIIDAE	PLOVERS
<i>Charadrius vociferus</i>	killdeer

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Scientific Name	Common Name
RECURVIROSTRIDAE	STILTS & AVOCETS
<i>Himantopus mexicanus</i>	black-necked stilt
SCOLOPACIDAE	SANDPIPERS
<i>Calidris minutilla</i>	least sandpiper
LARIDAE	SKUAS, GULLS, TERNS, SKIMMERS
<i>Larus californicus</i>	California gull
<i>Larus occidentalis</i>	western gull
COLUMBIDAE	PIGEONS & DOVES
<i>Columba livia</i>	rock pigeon
<i>Zenaida macroura</i>	mourning dove
CAPRIMULGIDAE	NIGHTHAWKS
<i>Chordeiles minor</i>	Common nighthawk
TROCHILIDAE	HUMMINGBIRDS
<i>Calypte anna</i>	Anna's hummingbird
PICIDAE	WOODPECKERS
<i>Colaptes auratus</i>	northern flicker
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Tyrannus verticalis</i>	western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
HIRUNDINIDAE	SWALLOWS
<i>Hirundo rustica</i>	barn swallow
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow
CORVIDAE	JAYS & CROWS
<i>Corvus brachyrhynchos</i>	American crow
AEGITHALIDAE	BUSHTITS
<i>Psaltiriparus minimus</i>	bushtit
TROGLODYTIDAE	WRENS
<i>Thryomanes bewickii</i>	Bewick's wren
REGULIDAE	KINGLETS
<i>Regulus calendula</i>	ruby-crowned kinglet
MIMIDAE	MOCKINGBIRDS, THRASHERS
<i>Mimus polyglottos</i>	northern mockingbird
PARULIDAE	WOOD WARBLERS
<i>Oreothlypis celata</i>	orange-crowned warbler
<i>Setophaga coronata</i>	yellow-rumped warbler
<i>Geothlypis trichas</i>	common yellowthroat
EMBERIZIDAE	EMBERIZIDS
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
FRINGILLIDAE	FINCHES

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Scientific Name	Common Name
<i>Spinus psaltria</i>	lesser goldfinch
<i>Carpodacus mexicanus</i>	house finch
PASSERIDAE	OLD WORLD SPARROWS
<i>Passer domesticus</i>	house sparrow
PHASIANIDAE	PHEASANTS AND PARTRIDGES
<i>Gallus domesticus</i>	rooster
PSITTACIDAE	NEOTROPICAL PARROTS
<i>Amazona viridigenalis</i>	Red-crowned parrot
CLASS MAMMALIA	MAMMALS
DIDELPHIDAE	NEW WORLD OPOSSUMS
<i>Didelphis virginiana</i>	Virginia opossum
SCIURIDAE	SQUIRRELS
<i>Spermophilus beecheyi</i>	California ground squirrel
CANIDAE	WOLVES & FOXES
<i>Canis familiaris</i>	domestic dog
<i>Canis latrans</i>	coyote
PROCYONIDAE	RACCOONS
<i>Procyon lotor</i>	raccoon

* Non-native species

APPENDIX B – PLANT SPECIES LIST



Appendix B:
Plant Species Observed

Scientific Name	Common Name
GYMNOSPERMS	
CUPRESSACEAE	CYPRESS FAMILY
<i>Cedrus deodara</i>	deodar cedar
PINACEAE	PINE FAMILY
<i>Pinus halepensis</i> *	Aleppo pine
ANGIOSPERMS (EUDICOTS)	
ADOXACEAE	MUSKROOT FAMILY
<i>Sambucus nigra</i> subsp. <i>caerulea</i>	blue elderberry
ANACARDIACEAE	SUMAC OR CASHEW FAMILY
<i>Malosma laurina</i>	laurel sumac
<i>Schinus molle</i> *	Peruvian pepper tree
APIACEAE	CARROT FAMILY
<i>Anthriscus caucalis</i>	bur-chervil
ASTERACEAE	SUNFLOWER FAMILY
<i>Ageratina adenophora</i> *	eupatory
<i>Ambrosia psilostachya</i>	western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Baccharis salicifolia</i> subsp. <i>salicifolia</i>	mule fat
<i>Bidens</i> sp.*	beggar-ticks
<i>Centaurea benedicta</i> *	blessed thistle
<i>Centaurea melitensis</i> *	toocalote
<i>Chamomilla suaveolens</i> *	pineapple weed
<i>Erigeron bonariensis</i> *	flax-leaved horseweed
<i>Erigeron canadensis</i>	horseweed
<i>Helianthus annuus</i>	common sunflower
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Hypochaeris glabra</i> *	smooth cat's-ear
<i>Lactuca serriola</i> *	prickly lettuce
<i>Lepidospartum squamatum</i>	scale-broom
<i>Pseudognaphalium californicum</i>	California everlasting
<i>Pseudognaphalium luteoalbum</i> *	everlasting cudweed
<i>Rafinesquia californica</i>	California chicory
<i>Senecio vulgaris</i> *	common groundsel
<i>Sonchus asper</i> subsp. <i>asper</i> *	prickly sow thistle
<i>Sonchus oleraceus</i> *	common sow thistle
<i>Taraxacum officinale</i> *	common dandelion
<i>Xanthium strumarium</i>	spiny cocklebur

Scientific Name	Common Name
BORAGINACEAE	BORAGE FAMILY
<i>Phacelia cicutaria</i>	caterpillar phacelia
BRASSICACEAE	MUSTARD FAMILY
<i>Descurainia pinnata</i>	western tansy-mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium lasiocarpum</i> subsp. <i>lasiocarpum</i>	sand peppergrass
<i>Lobularia maritima</i> *	sweet-alyssum
<i>Raphanus sativus</i> *	radish
<i>Sisymbrium irio</i> *	London rocket
CACTACEAE	CACTUS FAMILY
<i>Opuntia ficus-indica</i> *	Indian fig
CARYOPHYLLACEAE	PINK FAMILY
<i>Herniaria hirsuta</i> var. <i>cinerea</i> *	herniaria
<i>Stellaria media</i> *	common chickweed
CASUARINACEAE	BEEFWOOD FAMILY
<i>Casuarina equisetifolia</i>	beach she-oak
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Chenopodium album</i> *	lamb's quarters
CRASSULACEAE	STONECROP FAMILY
<i>Crassula connata</i>	pygmy-weed
EUPHORBIACEAE	SPURGE FAMILY
<i>Croton californicus</i>	California croton
<i>Ricinus communis</i> *	castor-bean
FABACEAE	LEGUME FAMILY
<i>Acemispson americanus</i> var. <i>americanus</i>	Spanish clover
<i>Lupinus bicolor</i>	miniature lupine
<i>Medicago polymorpha</i> *	bur clover
<i>Melilotus indica</i> *	sourclover
FAGACEAE	OAK FAMILY
<i>Quercus agrifolia</i>	coast live oak
GERANIACEAE	GERANIUM FAMILY
<i>Erodium botrys</i> *	broad-lobed filaree
<i>Erodium cicutarium</i> *	red-stemmed filaree
LAMIACEAE	MINT FAMILY
<i>Lamium amplexicaule</i> *	henbit
MALVACEAE	MALLOW FAMILY
<i>Malva parviflora</i> *	cheeseweed
MORACEAE	MULBERRY FAMILY
<i>Morus alba</i> *	white mulberry

Scientific Name	Common Name
MYRTACEAE	MYRTLE FAMILY
<i>Eucalyptus globulus</i> *	blue gum
OLEACEAE	OLIVE FAMILY
<i>Fraxinus velutina</i>	velvet ash
ONAGRACEAE	EVENING PRIMROSE FAMILY
<i>Camissonia</i> sp.	camissonia
<i>Camissoniopsis micrantha</i>	small primrose
<i>Epilobium ciliatum</i>	California cottonweed
PASSIFLORACEAE	PASSION FLOWER FAMILY
<i>Passiflora edulis</i> *	passion fruit
PLANTAGINACEAE	PLANTAIN FAMILY
<i>Plantago lanceolata</i> *	English plantain
<i>Veronica anagallis-aquatica</i> *	water speedwell
PLATANACEAE	SYCAMORE FAMILY
<i>Platanus racemosa</i>	western sycamore
POLEMONIACEAE	PHLOX FAMILY
<i>Gilia achilleifolia</i> subsp. <i>multicaulis</i>	California gilia
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Persicaria lapathifolia</i>	willow-weed
RHAMNACEAE	BUCKTHORN FAMILY
<i>Frangula californica</i>	California coffeeberry
SALICACEAE	WILLOW FAMILY
<i>Salix exigua</i>	narrow-leaved willow
<i>Salix gooddingii</i>	black willow
<i>Salix laevigata</i>	red willow
SAPINDACEAE	SOAPBERRY FAMILY
<i>Cupaniopsis anacardioides</i> *	carrotwood
<i>Koeleruteria bipinnata</i> *	Chinese flame tree
SOLANACEAE	NIGHTSHADE FAMILY
<i>Nicotiana glauca</i> *	tree tobacco
<i>Solanum douglasii</i>	Douglas' nightshade
TAMARICACEAE	TAMARISK FAMILY
<i>Tamarix ramosissima</i> *	Mediterranean tamarisk
URTICACEAE	NETTLE FAMILY
<i>Urtica urens</i> *	dwarf nettle
ANGIOSPERMS (MONOCOTS)	
ARECACEAE	PALM FAMILY
<i>Washingtonia robusta</i> *	Mexican fan palm

Scientific Name	Common Name
CYPERACEAE	SEDGE FAMILY
<i>Scirpus</i> sp.	bulrush
POACEAE	GRASS FAMILY
<i>Agrostis stolonifera</i> *	redtop
<i>Avena barbata</i> *	slender wild oat
<i>Bromus catharticus</i> *	rescue grass
<i>Bromus diandrus</i> *	ripgut grass
<i>Bromus madritensis</i> subsp. <i>madritensis</i> *	foxtail chess
<i>Elymus</i> sp.	beardless wild rye
<i>Festuca myuros</i> *	fescue
<i>Hordeum murinum</i> *	glaucous foxtail barley
<i>Schismus barbatus</i> *	Mediterranean schismus
<i>Stipa miliacea</i> var. <i>miliacea</i> *	smilo grass
*Non-Native Species	

APPENDIX C – SITE PHOTOGRAPHS



Appendix C: Site Photographs

	<p>Photo 1: The photo was taken looking west at the Peck Road Water Conservation Park and the maintained landscaping.</p>
	<p>Photo 2: This photo was taking facing northeast across the basin looking at the disturbed vegetation and scattered willows along the banks.</p>
	<p>Photo 3: The photo was taken looking at the numerous small patches of willow woodlands.</p>

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Photo 4: The photo was taken looking at a mound of cracked concrete on the eastern border of the Peck Road Spreading Basin Site.



Photo 5: The photo was taken looking at the dense riparian zone near Sawpit Wash on the northeast corner of the Peck Road Spreading Basin Site.



Photo 6: The photo was taken looking at Sawpit Wash concrete channel and creek in the dense riparian zone.

Appendix C: Site Photographs
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Photo 7: The photo was taken looking north at the layered riparian zone near Sawpit Wash.



Photo 8: The photo was taken looking at the western pond turtle (white arrow) that was identified on the Peck Road Spreading Basin Site. The turtle to the right is a red-eared slider.



Photo 9: The photo was taken looking west at non-native arundo growing along the banks of Peck Road Spreading Basin Site.

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Photo 10: The photo was taken looking at Santa Anita Wash entering Peck Road Spreading Basin Site.



Photo 11: This photo depicts the dry Santa Ana Wash bed and the tall riparian vegetation on either side of the banks.



Photo 12: The photo was taken looking at the dense willow and riparian coverage along the banks of Santa Anita Wash.



Photo 13: This photo was taking looking at a few of the over 30 red eared sliders that were identified on the site.



Photo 14: The photo was taken looking south across the Peck Road Spreading Basin Site.



Photo 15: The photo was taken looking south across the San Gabriel River Site.



Photo 16: The photo was taken looking east at the second drop structure on the north end of the San Gabriel River Site.



Photo 17: The photo was taken looking north from the south end of the San Gabriel River Site. The photo depicts the low lying non-native grasses and mule fat there are common in the dry channel.

**APPENDIX C – FOCUSED PROTOCOL SURVEYS FOR LEAST BELL’S VIREO AND
SOUTHWESTERN WILLOW FLYCATCHER**



September 20, 2013
(20584)

Alison Wong
Water Resources Division
County of Los Angeles Department of Public Works
900 South Fremont Ave.
Alhambra, California 91803-1331

SUBJECT: FOCUSED PROTOCOL SURVEYS FOR LEAST BELL'S VIREO AND SOUTHWESTERN WILLOW FLYCATCHER FOR THE PECK WATER CONSERVATION IMPROVEMENT PROJECT, LOS ANGELES COUNTY, CALIFORNIA

Dear Ms. Wong:

Chambers Group, Inc. (Chambers Group) was retained by the County of Los Angeles Department of Public Works (LACDPW) to conduct focused surveys for least Bell's vireo (*Vireo bellii pusillus*, LBVI) and southwestern willow flycatcher (*Empidonax traillii extimus*, SWFL) for the Peck Water Conservation Improvement Project. The Peck Water Conservation Improvement Project consists of two sites: the Peck Road Spreading Basin and the San Gabriel site. Focused surveys for LBVI and SWFL were conducted at the Peck Road Spreading Basin site located in the City of Arcadia, Los Angeles County, California. The results of the surveys are presented in this letter report.

Peck Road Spreading Basin

The Peck Road Spreading Basin site is located on the California United States Geological Survey (USGS) 7.5-minute *El Monte* topographic quadrangle (Attachment 1). The Peck Road Spreading Basin consists of a water basin that spans over three quarter mile in length by a quarter mile wide in a former mining pit. The basin is surrounded by a golf course and private residences to the north, private residences to the west and south, and commercial industries to the east. The basin is fed by two main channels (Santa Anita Wash and Sawpit Wash) on the north side of the lake and emerging groundwater. The basin has areas of dense riparian scrub, surrounded by bare ground high along the banks and within a maintained park. The Peck Road Water Conservation Park (Peck Road Park) is used by the public for hiking and fishing, and is composed of trails and non-native vegetation including ornamental trees.

The Sawpit Wash section of the basin (northeast corner) is generally slow moving, with areas of glides and pools, with an earthen bottom and small areas of disturbance. The in-stream vegetation and banks for the majority of the stream inside of the inlet consist of dense willows and riparian scrub vegetation. The Santa Anita Wash portion of the basin (north section) consists of tall mature willow riparian cover, with no water flowing in the wash at the time of the survey. The Santa Anita Wash channel in the basin appears to be earthen with approximately 6 feet deep erosional banks on either side of the wash. However, based on communication with LACDPW, the channel within the site is actually concrete with a heavy accumulation of sediment. Water within the basin exits south through a concrete spillway from the southwest end of the basin (Attachment 2), flows southwestwardly through a channel known as the Rio Hondo, connects with the Los Angeles River, and eventually terminates into the Pacific Ocean.

LEAST BELL'S VIREO NATURAL HISTORY

The LBVI was state listed as an endangered subspecies of Bell's vireo by the California Department of Fish and Wildlife (CDFW), formally the Department of Fish and Game (CDFG), in 1980 and federally listed as endangered by the United States Fish and Wildlife Service (USFWS) in 1986. Critical habitat for the LBVI was designated by USFWS in 1994. The LBVI subspecies is restricted to coastal and inland southern California and Baja California, Mexico. Its winter range extends along the Pacific coast from northern Mexico south to northern Nicaragua.

The LBVI is a small, gray songbird with pale yellow wash on its sides, two faint wing bars, and a faint eye ring. Preferred nesting habitat is low, dense, scrubby vegetation in early successional areas that are particularly dependent on riparian areas. Habitats may include willow woodlands and dense mule fat (*Baccharis salicifolia* subsp. *salicifolia*), scrub oak (*Quercus berberidifolia*), coastal chaparral, and mesquite (*Prosopis* sp.) patches with dense, early successional understories. On the breeding grounds, the LBVI feeds primarily on insects and small spiders. The two major factors in the decline of LBVI populations are loss of habitat and nest parasitism by the brown-headed cowbird (*Molothrus ater*).

SOUTHWESTERN WILLOW FLYCATCHER NATURAL HISTORY

The SWFL is a federally and state endangered subspecies of willow flycatcher whose summer breeding range includes southern California (from the Santa Ynez River south), Arizona, New Mexico, extreme southern portions of Nevada and Utah, extreme southwest Colorado, and western Texas (USGS 2007). Habitat types may include a variety of willow (*Salix spp.*), cottonwood (*Populus spp.*), coast live oak (*Quercus agrifolia*), alder (*Alnus spp.*), and tamarisk (*Tamarix spp.*) woodlands. The SWFL is safely distinguished from other members of its genus only by its characteristic *fitzbew* song and breeding area. The SWFL is a relatively non-descript flycatcher with a dark back, two faint wing bars, yellow lower mandible, faint wash of yellow on the belly, and little to no eye ring. It forages for insects on the wing, and embarks on short flights from favorite perches to catch the flying insects. While perched, SWFL characteristically flicks its tail upwards on occasion (Sogge et al. 2010). This species is in decline primarily due to extensive habitat loss and brood parasitism by the brown-headed cowbird.

METHODS

During a biological reconnaissance-level survey conducted on May 21, 2013, Chambers Group biologists Corey Vane and Heather Clayton assessed the Peck Water Conservation Improvement Project sites and determined that areas within the Peck Road Spreading Basin site was suitable for LBVI and SWFL (Chambers Group 2013). The focused surveys were conducted within these identified areas (Attachment 3).

Nine focused LBVI surveys were led by Chambers Group qualified biologists Linette Lina and Corey Vane, who are familiar with the songs, whisper songs, calls, scolds, and visual identification of LBVI (Table 1). The focused surveys were conducted according to USFWS protocols (USFWS 2001). L. Lina, who is permitted to use recorded SWFL calls for surveys (TE-161483-1), also conducted five SWFL surveys concurrently with LBVI surveys according to *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher* (Sogge et al. 2010; USFWS Letter 2010). One SWFL survey pass was conducted between May 15 and June 1 (SWFL Survey Period 1), two survey passes were conducted between June 2 and June 24 (SWFL Survey Period 2), and two survey passes were conducted between June 25 and July 17 (SWFL Survey Period 3). C.

Vane surveyed for LBVI the remaining three surveys and one additional survey (ninth survey, on July 22, 2013) due to temperature constraints on the eighth survey.

All surveys were conducted on foot by looking and listening for the target species in all suitable riparian habitats within the survey area. Surveys were conducted during favorable weather conditions. Surveys were not conducted during excessive heat, cold, wind, rain, or other inclement weather that would be reasonably expected to reduce bird activity and consequential detection. No more than 3 linear kilometers or 50 hectares (124 acres) of suitable habitat were covered during any single survey day.

Observations of the songs, scolds, whisper calls, flight patterns, behaviors, and plumage characteristics were used in conjunction to ascertain presence/absence of LBVI and SWFL. Biologists conducted the surveys from optimal stationary locations to see and hear the target species without harming any other wildlife species in the area.

L. Lina used pre-recorded willow flycatcher vocalizations to elicit SWFL within the survey area (taped vocalizations were not used to determine the presence/absence of LBVI). After a brief and silent acclimation period of one to two minutes, L. Lina broadcasted the pre-recorded SWFL vocalizations at least once at each chosen location mimicking natural vocalization conditions (i.e., broadcast at natural volume occurring for approximately 15 seconds followed by one to two minutes of silence). Broadcast locations varied from 20 to 30 meters (60 to 100 feet), depending on topographic, vegetative, and other factors. If a willow flycatcher was detected, the taped vocalization broadcast ceased at that location, and location, numbers, status, and demographic data were recorded for SWFL.

The locations of any LBVI, SWFL, and other sensitive species were documented and mapped (Attachment 4), and California Natural Diversity Database (CNDDDB) forms and Willow Flycatcher Survey and Detection forms were prepared (Attachment 5). Observations and numbers of brown-headed cowbirds were also noted and mapped (Attachment 4). If leg bands were observed, they were noted. All observed wildlife species were recorded for each survey day (Attachment 6). Photos of the Spreading Basin were taken to document existing site conditions. Photos are provided in Attachment 7.

RESULTS

Vegetation Communities

Quality habitat for LBVI and SWFL exists in the two drainages that enter the project site from the north. The Santa Anita Wash and Sawpit Wash riparian zones consist of a combined 9.64 acres of dense forest of willows and mule fat that provide for foraging and nesting habitat for the LBVI and SWFL. Water flows entirely through the Sawpit Wash riparian zone while Santa Anita Wash only has water flowing in the extreme northern section of the riparian zone. Both sites consist of two main vegetation communities: Southern Willow Scrub and Disturbed Freshwater Marsh. Plant communities and associations were recorded in accordance with the categories set forth in *A Manual of California Vegetation* (Holland 1986, Gray and Bramlet 1992). Plant nomenclature follows that of *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012).

Southern Willow Scrub

Southern Willow Scrub is dominated by willow species (*Salix* spp.) and saplings of riparian forest (Gray and Bramlet 1992). Common dominant species of this community may include: arroyo willow (*Salix lasiolepis*) and narrow-leaf willow (*Salix exigua*) with lesser amounts of mule fat and black willow (*Salix gooddingii*).

A large area on the northeastern corner of the Peck Road Spreading Basin has been mapped as Southern Willow Scrub. Plant species found on the Peck Road Spreading Basin typical of this vegetation community included: California cottonweed (*Epilobium ciliatum*), velvet ash (*Fraxinus velutina*), western sycamore (*Platanus racemosa*), black willow, narrow-leaf willow, mule fat, and red willow (*Salix laevigata*).

Disturbed Freshwater Marsh

Disturbed Freshwater Marsh is described by Holland (1986) as being dominated by perennial, emergent monocot species between 13 to 16 feet in height that often form completely closed canopies. Disturbed Freshwater Marsh typically lacks a significant current, but is permanently flooded with fresh water, where this prolonged saturation results in deep, peaty soils. This community can be found along the coast, in coastal valleys near river mouths and around the margins of lakes and springs.

Disturbed Freshwater Marsh is present within the basin bordering Southern Willow Scrub. Plant species found on the Site typical of this vegetation community included: horseweed (*Erigeron canadensis*), and willow-weed (*Persicaria lapathifolia*).

Survey Conditions

Survey conditions are presented in Table 1.

Table 1. Survey Conditions

Date	Surveyor ⁺	Time		Temperature		Wind		Cloud Cover		Precipitation	
		Start	End	Start	End	Start	End	Start	End	Start	End
05/13/13	Corey Vane	6:30 A.M.	11:25 A.M.	65	99	0-1	1-3	0%	0%	0	0
05/24/13	Lead: Linette Lina Support: Carley Jennings	6:10 A.M.	10:45 A.M.	60	71	0	3	95%	50%	0	0

Table 1. Survey Conditions

Date	Surveyor ⁺	Time		Temperature		Wind		Cloud Cover		Precipitation	
		Start	End	Start	End	Start	End	Start	End	Start	End
06/04/13	Lead: L. Lina Support: C. Vane	6:15 A.M.	1:00 P.M.	63	71	2-4	1-2	100%	25%	0	0
06/18/13	Lead: L. Lina Support: Paul Morrissey	5:15 A.M.	10:45 A.M.	64	76	0	3-5	0%	0%	0	0
06/28/13	Lead: L. Lina Support: P. Morrissey	5:45 A.M.	9:45 A.M.	66	82	1	0-1	5%	5%	0	0
07/08/13	Lead: L. Lina Support: P. Morrissey	5:50 A.M.	10:00 A.M.	65	81	0	1-2	0%	0%	0	0
07/18/13	C. Vane	6:20 A.M.	11:40 A.M.	59	94	0-1	1-4	0%	0%	0	0
07/22/13	Lead: C. Vane Support: Sam Bressler	6:15 A.M.	10:25 A.M.	70	82	0-1	0-1	30%	15%	0	0

Table 1. Survey Conditions

Date	Surveyor ⁺	Time		Temperature		Wind		Cloud Cover		Precipitation	
		Start	End	Start	End	Start	End	Start	End	Start	End
7/29/13	C. Vane	6:40 A.M.	9:30 A.M.	63	74	0-1	0-1	100%	0%	0	0

*All temperature readings are in Fahrenheit

**All wind readings are in miles per hour

⁺Support biologists assisted the Lead biologist under supervision

Least Bell's Vireo

Three LBVI territories were observed within the survey areas (Attachment 4). No leg bands were observed on any LBVI. A summary of data is presented in Table 2, followed by a general discussion for each territory.

Table 2 LBVI Results Summary

Territory #	Territory GPS UTM, NAD 83, 11S	Nest Location UTM, NAD 83, 11S	Status
1	0406434 E 3774001 N	Possible nest at 0406451 E 3773984 N	Pair with possible nest
2	0406389 E 3773978 N	Not Detected	Pair with at least 1 fledgling
3	0406833 E 3774358 N	Not Detected	Pair with at least 1 fledgling

The pair at Territory 1 was first observed during the May 13, 2013 survey foraging along the southeastern shore of Santa Anita Wash, along the banks. During the May 24, 2013 survey, the pair was observed approaching and leaving a patch of shrubbery (inaccessible by the surveyors), one at a time, during regular 15-minute intervals, suggestive of incubation on a possible nest. However, the pair was not observed returning to that location during the June 4, 2013 survey, even though they were observed in the area. During the June 28, 2013 survey, a singing LBVI was observed on the northeastern shore of Peck Road Park (Attachment 4), and was presumed to be the male of the same pair.

The pair at Territory 2 was first observed during the June 4, 2013 survey. The male at Territory 2 was counter-singing with the male LBVI at Territory 1. The pair occupied the western half of the Southern Willow Scrub habitat of Santa Anita Wash (Attachment 4). During the July 18, 2013 survey, a fledgling was observed begging to the male.

The male at Territory 3 was first observed during the June 4, 2013 survey within the western half of Sawpit Wash (Attachment 4). During the June 18 and 28, 2013 and July 8, 2013 surveys, the pair at this territory was observed feeding at least one fledgling.

Santa Anita Wash Fire

During the weekend of July 19-21, 2013, a five-acre fire burned approximately 80 percent of the habitat within the Santa Anita Wash riparian area. Small patches of vegetation remain along the water edge and within the western corner near the golf course. According to the local transients, the fire was started by two teenage boys who were spotted lighting willow fluff on fire. A map of the burn area is provided in Attachment 8.

A survey visit was conducted on July 22, 2013. No LBVI were detected in the Santa Anita Wash. Most of Territory 1 was burned and scattered habitat remains within Territory 2. However, it appeared that LBVI in Santa Anita Wash relocated to the Sawpit Wash. Three males were heard singing in the Sawpit Wash approximately 100 feet north of the mouth of the river. All three males were found close to GPS point UTM NAD 83 (11S 406844 E 3774310 N). Two males and one fledgling were heard along the eastern end of the outlet of Sawpit Wash, and one male was heard on the western end of the outlet. The three males were vocalizing and are likely competing over suitable habitat and foraging grounds.

Southwestern Willow Flycatcher

A willow flycatcher was observed vocalizing in response to broadcast calls and songs during the May 24, 2013 survey. No leg bands were observed. The May 24, 2013 survey occurred during SWFL Survey Period 1, when detected willow flycatchers may be migrants or may be breeding SWFL (Sogge et al. 2010). Because the willow flycatcher was not detected in any survey after this date, it was determined that it was an unknown subspecies of willow flycatcher, and was not a SWFL that was breeding in the survey area.

Other Sensitive Species

Territorial and paired yellow warblers (*Setophaga petechia*), a California Species of Special Concern (SSC), were incidentally observed during several surveys within both the Santa Anita and Sawpit Washes (Attachment 4). The maximum number of yellow warblers observed at the Santa Anita Wash was six individuals during the June 28, 2013 survey. The maximum number of yellow warblers observed at the Sawpit Wash was 10 individuals during the June 4 survey.

Yellow-breasted chats (*Icteria virens*), a SSC, were incidentally observed in both the Santa Anita and Sawpit Washes during every focused survey for LBVI and SWFL prior to the fire at the Santa Anita Wash (Attachment 4). During the May 13, 2013 survey, one pair was observed with nesting material flying into the emergent mule fat and willows growing in the middle of the Santa Anita Wash riparian area. At least one yellow-breasted chat was observed in each wash during all surveys prior to the fire.

At least one southwestern pond turtle (*Actinemys marmorata pallida*) was observed in the water of the Peck Road Spreading Basin between Sawpit Wash and Santa Anita Wash during the June 18, 2013 survey (Attachment 4).

Brown-Headed Cowbird

Brown-headed cowbirds were observed throughout the survey area during several surveys (Attachment 4). The maximum number of brown-headed cowbirds detected within the Santa Anita Wash during any one survey visit was two individuals during the June 28, 2013 survey. The maximum number of brown-headed cowbirds detected within the Sawpit Wash during any one survey visit was four individuals during the July 8, 2013 survey.

CONCLUSIONS

Least Bell's Vireo

Three breeding pairs of LBVI were observed within the survey area. One pair was confirmed to raise at least one fledgling within the Sawpit Wash, and another pair was confirmed to raise at least one fledgling within the Santa Anita Wash.

Due to the fire and subsequent extensive loss of habitat at the Santa Anita Wash, this area is not expected to support nesting LBVI during the 2014 nesting season. However, suitable habitat still exists at the Sawpit Wash riparian area, and if the LBVI pairs displaced by the Santa Anita Wash fire attempt to nest in this area in future seasons, there will be higher competition for space and resources.

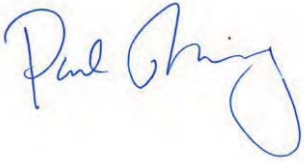
Southwestern Willow Flycatcher

Even though the willow flycatcher species was detected within the survey area during one survey, it was not detected during any of the other focused SWFL surveys. It was determined that the observed willow flycatcher was migrating through the survey area and was not breeding. Since this individual was not determined to be the breeding SWFL subspecies, no confirmed SWFL were found within the survey area. The SWFL subspecies is not considered present within the survey area. The results of this survey are valid for one year.

Additionally, after the conclusion of the SWFL surveys, the Santa Anita Wash fire burned over 80 percent of the suitable habitat where the willow flycatcher was found. The Santa Anita Wash is not expected to support any nesting SWFL without extensive regrowth of the destroyed vegetation and new growth of additional habitat.

Please contact me at (949) 261-5414 ext. 7288 if you have any questions or concerns regarding these results.

Sincerely,

A handwritten signature in blue ink that reads "Paul Morrissey". The signature is fluid and cursive, with the first name "Paul" and last name "Morrissey" clearly legible.

Paul Morrissey
Senior Project Manager

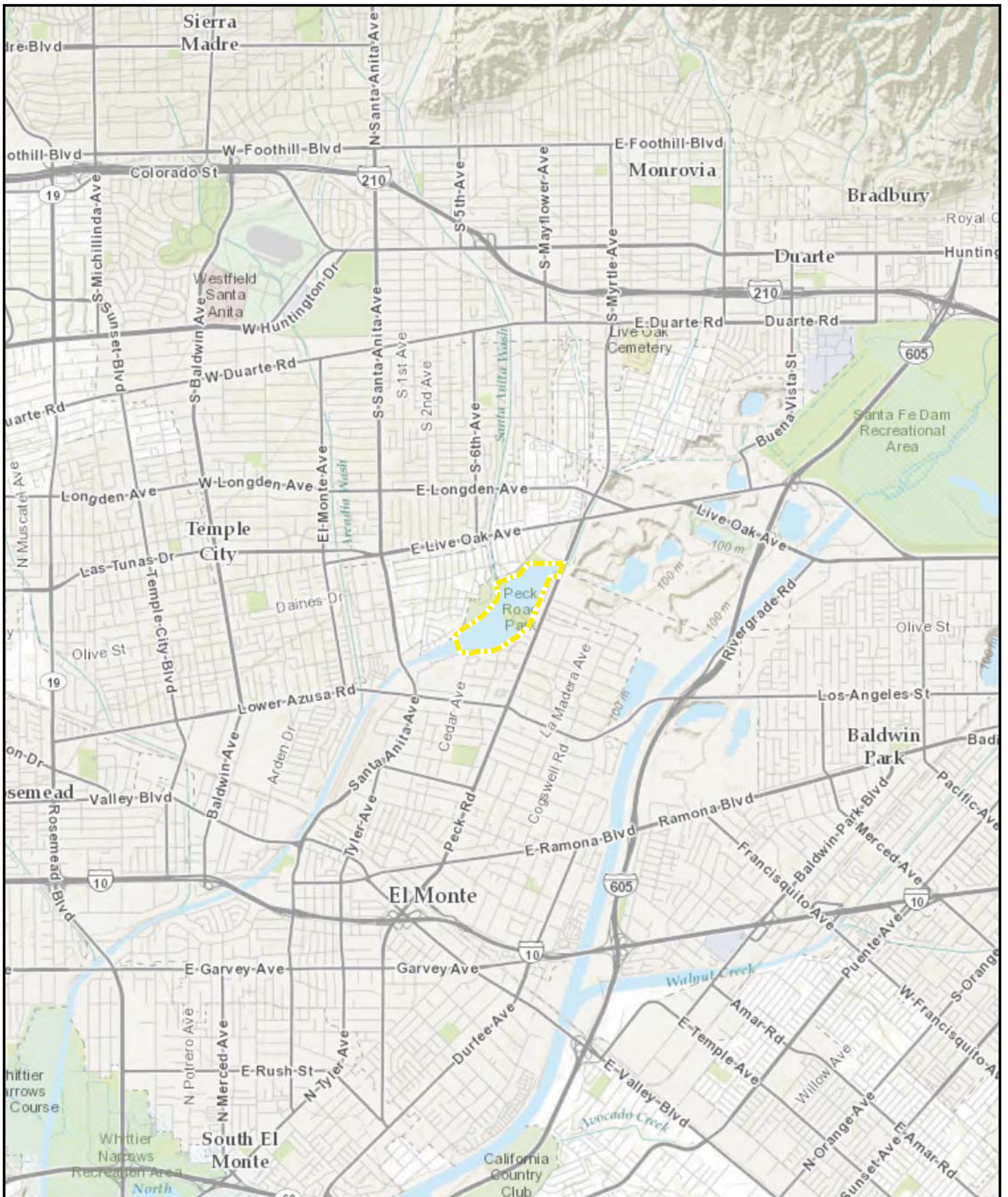
ATTACHMENTS


- Attachment 1 – Project Vicinity Map
- Attachment 2 – Project Location Map
- Attachment 3 – Survey Area Map
- Attachment 4 – Survey Results Map
- Attachment 5 – Report Forms
- Attachment 6 – Wildlife Species Observed
- Attachment 7 – Site Photographs
- Attachment 8 – Burn Area Map

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ATTACHMENT 1 – Project Vicinity Map

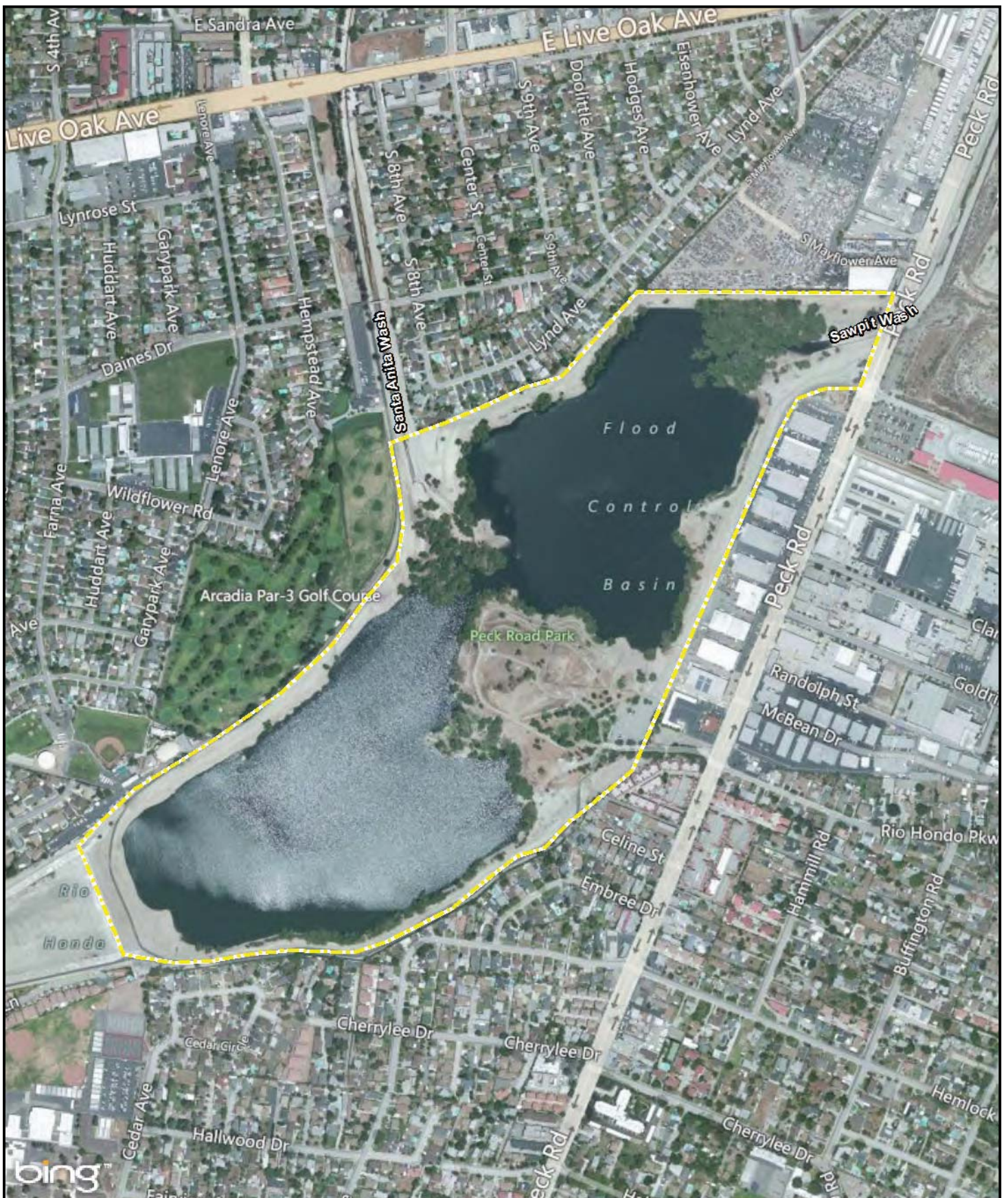


 Peck Road Spreading Basin



Attachment 1 **Peck Water Conservation Improvement Project** **LBVI/SWFL** **Project Vicinity**

ATTACHMENT 2 – Project Location Map



 Peck Road Spreading Basin



0 1,000 2,000
Feet

Attachment 2

Peck Water Conservation Improvement Project

LBVI/SWFL

Project Location

Name: 20584 LBVI_SWFL Attach2 Project Location.Mxd
Print Date: 8/19/2013, Author: jaynes



ATTACHMENT 3 – Survey Area Map

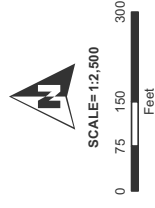
ATTACHMENT 4 – Survey Results Map

Attachment 4 **Peck Water Conservation** **Improvement Project** **LBVI/SWFL**

Survey Results Map

Version Date: 12/17/2013

- Species Observations**
- Peck Road Spreading Basin
 - Brown-headed Cowbird
 - Least Bell's Vireo
 - Willow Flycatcher
 - Yellow Warbler
 - Yellow-breasted Chat
 - western pond turtle
 - LBVI #1 Territory
 - LBVI #2 Territory
 - LBVI #3 Territory



Source: Esri, DigitalGlobe, GeoEye, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community
 Service Layer Credits: Copyright © 2013 Esri, DeLorme, NAVTEQ, TomTom

ATTACHMENT 5 – Report Forms

Appendix 1. Willow Flycatcher Survey and Detection Form

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (<http://www.fws.gov/southwest/es/arizona/>) for the most up-to-date version.

Willow Flycatcher (WIFL) Survey and Detection Form (revised April 2010)

Site Name PECK ROAD BASIN State CA County LOS ANGELES
 USGS Quad Name EL MONTE Elevation 91 (meters)
 Creek, River, Wetland, or Lake Name PECK RD. FLOOD CONTROL BASIN
 Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes ☒ No ☐

Survey Coordinates: Start: E See below N UTM Datum NAD 83 (See instructions)
 Stop: E N UTM Zone 11S

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

**** Fill in additional site information on back of this page ****

Survey #	Date (m/d/y)	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N If Yes, number of nests	Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats (livestock, cowbirds, <i>Diorhabda</i> spp.)). If <i>Diorhabda</i> found, contact USFWS and State WIFL coordinator	GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary.			
Observer(s) (Full Name)	Survey time						# Birds	Sex	UTM E	UTM N
Survey # 1 Observer(s) LINETTE LINA	Date <u>5/24/13</u> Start <u>0610</u> Stop <u>1125</u> Total hrs <u>5.25</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>Saw 1 WIFL</u> Start: <u>0406416E</u> <u>3774271N</u> Stop: <u>406366E</u> <u>3773923N</u> 1 WIFL responded to broadcasts	<u>1</u>	<u>U</u>	<u>0406403</u>	<u>3773963</u>
Survey # 2 Observer(s) L. LINA	Date <u>6/4</u> Start <u>0615</u> Stop <u>1300</u> Total hrs <u>6.75</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	Start: <u>0406403E</u> <u>3773968N</u> Stop: <u>0406845E</u> <u>3774273N</u>				
Survey # 3 Observer(s) L. LINA	Date <u>6/18</u> Start <u>0515</u> Stop <u>1045</u> Total hrs <u>5.5</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	Start: <u>0406403E</u> <u>3773963N</u> Stop: <u>0406845E</u> <u>3774273N</u>				
Survey # 4 Observer(s) L. LINA	Date <u>6/28</u> Start <u>0545</u> Stop <u>0945</u> Total hrs <u>4</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	Start: <u>0406418E</u> <u>3774107N</u> Stop: <u>0406864E</u> <u>3774258N</u>				
Survey # 5 Observer(s) L. LINA	Date <u>7/8</u> Start <u>0550</u> Stop <u>1000</u> Total hrs <u>4.2</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	Start: <u>0406864E</u> <u>3774258N</u> Stop: <u>0406340E</u> <u>3773977N</u>				
Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total Survey Hrs		Total Adult Residents	Total Pairs	Total Territories	Total Nests	Were any Willow Flycatchers color-banded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, report color combination(s) in the comments section on back of form and report to USFWS.				
		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>					

Reporting Individual LINETTE LINA Date Report Completed 08/14/13
 US Fish and Wildlife Service Permit # TE161483-1 State Wildlife Agency Permit # SC-068260 +M04
Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.

32 A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher

Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.

Reporting Individual LINETTE LINA Phone # (949) 261-5414
 Affiliation CHAMBERS GROUP INC. E-mail llina@chambersgroupinc.com
 Site Name PECK RD. BASIN Date Report Completed 08/14/13

Did you verify that this site name is consistent with that used in previous years? Yes ☐ No ☐ Not Applicable ☒
 If site name is different, what name(s) was used in the past? _____
 If site was surveyed last year, did you survey the same general area this year? Yes ☐ No ☐ If no, summarize below. _____
 Did you survey the same general area during each visit to this site this year? Yes ☐ No ☐ If no, summarize below. _____

Management Authority for Survey Area: Federal ☐ Municipal/County ☒ State ☐ Tribal ☐ Private ☐
 Name of Management Entity or Owner (e.g., Tonto National Forest) LOS ANGELES COUNTY

Length of area surveyed: 400 (meters)

Vegetation Characteristics: Mark the category that best describes the predominant tree/shrub foliar layer at this site (check one):

- ☐ Native broadleaf plants (entirely or almost entirely, > 90% native, includes high-elevation willow)
☒ Mixed native and exotic plants (mostly native, 50 - 90% native)
☐ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)
☐ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.

Salix goodingii, Salix laevigata, ~~Rumex crispus~~ Persicaria lapathifolia

Average height of canopy (Do not include a range): 10 (meters)

Attach copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections.
 Attach sketch or aerial photo showing site location, patch shape, survey route, location of any WIFLs or WIFL nests detected.
 Attach photos of the interior of the patch, exterior of the patch, and overall site; describe any unique habitat features.

Comments (attach additional sheets if necessary)

I WIFL detected on 5/24, but not during any other survey visit.
It is presumed to be a migrant. See "Focused Protocol
Surveys for Least Bell's Vireo and Southwestern Willow Flycatcher
at Peck Road Basin Los Angeles County, CA" for
more details.

Territory Summary Table. Provide the following information for each verified territory at your site.

Territory Number	All Dates Detected	UTM N	UTM E	Pair Confirmed? Y or N	Nest Found? Y or N	Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior)

Attach additional sheets if necessary

Appendix 2. Willow Flycatcher Survey Continuation Sheet / Territory Summary Table

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (<http://www.fws.gov/southwest/es/arizona/>) for the most up-to-date version.

Willow Flycatcher Survey Continuation Sheet

(For reporting additional detections and territories; append to Survey and Detection form)

Reporting Individual LINETTE LINA Phone # (949) 261-5414
Affiliation CHAMBERS GROUP, INC. E-mail lina@chambersgroupinc.com
Site Name PECK RD. BASIN Date Report Completed 8/14/13

[illegible]

Comments

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 07/29/2013

Reset

California Native Species Field Survey Form

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Scientific Name: *Empidonax traillii extimus*

Common Name: Southwestern Willow Flycatcher

Species Found? ☐ Yes ☒ No See comments, below
If not, why? _____
Total No. Individuals 0 Subsequent Visit? ☐ yes ☒ no
Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____
Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Linette Lina
Address: 5 Hutton Centre Dr. Suite 750
Santa Ana, CA 92707
E-mail Address: lina@chambersgroupinc.com
Phone: (949) 261-5414

Plant Information

Phenology: 90% vegetative 5% flowering 5% fruiting

Animal Information

0
adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☒ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Mouth of Santa Anita wash (northwest region of basin) and mouth of Sawpit Wash (northeast region of basin) of Peck Road Flood Control Basin, El Monte, CA.

County: Los Angeles Landowner / Mgr.: County of Los Angeles
Quad Name: El Monte Elevation: 300 feet
T_{1S} R_{11W} Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐
DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☒ OR Geographic (Latitude & Longitude) ☐
Coordinates: _____

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):
Southern Willow Scrub dominated by black willow (average 30 feet tall), stinging nettle, jimson weed.

No southwestern willow flycatchers confirmed. One willow flycatcher of undetermined subspecies was detected vocalizing and foraging during the 5/24 survey. However, because it was not detected during protocol surveys before or after this date during the season, it was presumed to be migratory instead of residential, and was not breeding onsite.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Industrial, residential, flood control, recreational

Visible disturbances: Homeless encampments, recreation

Threats: Fire, vegetation modification for homeless encampment, vegetation modification for recreation, flood control practices

Comments: Conducted protocol southwestern willow flycatcher surveys from 5/24 through 7/08/13.
Approximately 80% of the willow riparian habitat at the mouth of Santa Anita Wash caught on fire during weekend of July 19-21, 2013.
Most of the suitable habitat for southwestern willow flycatcher was damaged or destroyed.

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: Vocalization, behavior, and known field marks

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☒
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☒ no ☐

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 07/29/2013

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California Native Species Field Survey Form

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Scientific Name: *Vireo bellii pusillus*

Common Name: Least Bell's Vireo

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 8 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Linette Lina

Address: 5 Hutton Centre Dr. Suite 750
Santa Ana, CA 92707

E-mail Address: llina@chambersgroupinc.com

Phone: (949) 261-5414

Plant Information

Phenology: 90% vegetative 5% flowering 5% fruiting

Animal Information

6 # adults 2 # juveniles # larvae # egg masses # unknown
☐ wintering ☒ breeding ☒ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Two pairs at mouth of Santa Anita wash (northwest region of basin) and one pair at mouth of Sawpit Wash (northeast region of basin) in Peck Road Flood Control Basin, El Monte, CA.

County: Los Angeles Landowner / Mgr.: County of Los Angeles

Quad Name: El Monte Elevation: 300 feet

T_{1S} R_{11W} Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S Source of Coordinates (GPS, topo. map & type): ArcGIS Map

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☒ OR Geographic (Latitude & Longitude) ☐

Coordinates: Pair 1 around 0406434 E 3774001 N; Pair 2 around 0406389 E 3773978 N; 0406833 E 3774358 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Pair 1 with possible nest but not confirmed; Pair 2 feeding at least 1 fledgling; Pair 3 feeding at least 1 fledgling

Habitat is Southern Willow Scrub dominated by black willow (average 30 feet tall), stinging nettle, jimson weed.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Industrial, residential, flood control, recreational

Visible disturbances: Homeless encampments, recreation

Threats: Fire, vegetation modification for homeless encampment, vegetation modification for recreation, flood control practices

Comments: Conducted protocol least Bell's vireo surveys from 5/13 through 7/29/13.

Approximately 80% of the willow riparian habitat at the mouth of Santa Anita Wash caught on fire during weekend of July 19-21, 2013.

Most of the habitat was damaged or destroyed. The 2 breeding pairs in the burn area appeared to have relocated to Sawpit Wash afterward.

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☒ Other: Vocalization, behavior, and known field marks

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☒
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☒ no ☐

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 07/29/2013

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California Native Species Field Survey Form

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Scientific Name: *Setophaga petechia*

Common Name: Yellow Warbler

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 10 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Linette Lina

Address: 5 Hutton Centre Dr. Suite 750
Santa Ana, CA 92707

E-mail Address: lina@chambersgroupinc.com

Phone: (949) 261-5414

Plant Information

Phenology: 90% vegetative 5% flowering 5% fruiting

Animal Information

10
adults # juveniles # larvae # egg masses # unknown
☐ wintering ☒ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Mouth of Santa Anita wash (northwest region of basin) and mouth of Sawpit Wash (northeast region of basin) of Peck Road Flood Control Basin, El Monte, CA.

County: Los Angeles Landowner / Mgr.: County of Los Angeles

Quad Name: El Monte Elevation: 300 feet

T_{1S} R_{11W} Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): Map

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☒ OR Geographic (Latitude & Longitude) ☐

Coordinates:

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):
Southern Willow Scrub dominated by black willow (average 30 feet tall), stinging nettle, jimson weed.

Territorial males or pairs.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Industrial, residential, flood control, recreational

Visible disturbances: Homeless encampments, recreation

Threats: Fire, vegetation modification for homeless encampment, vegetation modification for recreation, flood control practices

Comments: Incidental detections made during biological surveys for other species, from from 5/13 through 7/29/13. No nests observed, but species is presumed to breed in the area. Approximately 80% of the willow riparian habitat at the mouth of Santa Anita Wash caught on fire during weekend of July 19-21, 2013. Most of the riparian habitat in this area was damaged or destroyed.

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☒ Other: Vocalization, behavior, and known field marks

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes ☒ no ☐

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Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 07/29/2013

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California Native Species Field Survey Form

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Scientific Name: *Icteria virens*

Common Name: Yellow-breasted Chat

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 2 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Linette Lina

Address: 5 Hutton Centre Dr. Suite 750
Santa Ana, CA 92707

E-mail Address: lina@chambersgroupinc.com

Phone: (949) 261-5414

Plant Information

Phenology: 90% vegetative 5% flowering 5% fruiting

Animal Information

2
adults # juveniles # larvae # egg masses # unknown
☐ wintering ☒ breeding ☒ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Mouth of Santa Anita wash (northwest region of basin) and mouth of Sawpit Wash (northeast region of basin) of Peck Road Flood Control Basin, El Monte, CA.

County: Los Angeles Landowner / Mgr.: County of Los Angeles

Quad Name: El Monte Elevation: 300 feet

T_{1S} R_{11W} Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S Source of Coordinates (GPS, topo. map & type): Map

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☒ OR Geographic (Latitude & Longitude) ☐

Coordinates:

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):
Southern Willow Scrub dominated by black willow (average 30 feet tall), stinging nettle, jimson weed.

Territorial males or pairs. One pair observed carrying nest material on 5/13/2013.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Industrial, residential, flood control, recreational

Visible disturbances: Homeless encampments, recreation

Threats: Fire, vegetation modification for homeless encampment, vegetation modification for recreation, flood control practices

Comments: Incidental detections made during biological surveys for other species, from from 5/13 through 7/29/13. Approximately 80% of the willow riparian habitat at the mouth of Santa Anita Wash caught on fire during weekend of July 19-21, 2013. Most of the riparian habitat in this area was damaged or destroyed.

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☒ Other: Vocalization, behavior, and known field marks

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes ☒ no ☐

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 06/18/2013

Reset

California Native Species Field Survey Form

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Scientific Name: *Emys marmorata*

Common Name: Western Pond Turtle

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 1 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Linette Lina

Address: 5 Hutton Centre Drive Suite 750
Santa Ana, CA 92707

E-mail Address: lina@chambersgroupinc.com

Phone: (949) 261-5414

Plant Information

Phenology: 10% vegetative 0% flowering 0% fruiting

Animal Information

1
adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

North end of Peck Road Flood Control Basin, in water approximately 25 feet from the north shore.

County: Los Angeles Landowner / Mgr.: County of Los Angeles

Quad Name: El Monte Elevation: 300 feet

T_{1S} R_{11W} Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): Map

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☒ OR Geographic (Latitude & Longitude) ☐

Coordinates: 406591 E 3774248 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Open water with unknown aquatic vegetation. Bank is mostly non-vegetated steep slopes made of fill.

The western pond turtle appeared to be foraging.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Immediate AND surrounding land use: Industrial, residential, flood control, recreations

Visible disturbances: Homeless encampments, recreation - including fishing

Threats: Large numbers of red-eared slider turtles, possible large mouth bass and other non-native fish, flood control practices, fire

Comments: Incidental detection made during a biological survey for other species.

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☒ By another person (name): Paul Morrissey
☒ Other: Field marks, behavior

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes ☒ no ☐

ATTACHMENT 6 – Wildlife Species Observed

**Attachment 6:
Wildlife Species Observed**

Scientific Name	Common Name
CLASS AMPHIBIA	AMPHIBIANS
RANIDAE	TRUE FROGS
<i>Lithobates catesbeianus</i>	Bullfrog*
CLASS REPTILIA	REPTILES
EMYDIDAE	BOX AND WATER TURTLES
<i>Actinemys marmorata pallida</i>	southwestern pond turtle
<i>Trachemys scripta elegans</i>	red-eared slider*
PHRYNOSOMATIDAE	ZEBRA-TAILED, EARLESS, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Uta stansburiana</i>	side-blotched lizard
TEIIDAE	WHIPTAIL LIZARDS
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail
CLASS AVES	BIRDS
PODICIPEDIDAE	GREBES
<i>Aechmophorus occidentalis</i>	western grebe
<i>Podilymbus podiceps</i>	pied-billed grebe
PHALACROCORACIDAE	CORMORANTS
<i>Phalacrocorax auritus</i>	double-crested cormorant
ARDEIDAE	HERONS, BITTERNS
<i>Ardea herodias</i>	great blue heron
<i>Butorides virescens</i>	green heron
<i>Ardea alba</i>	great egret
<i>Egretta thula</i>	snowy egret
<i>Nycticorax nycticorax</i>	black-crowned night-heron
ANATIDAE	DUCKS, GEESE, SWANS
<i>Anas platyrhynchos</i>	Mallard
<i>Anas platyrhynchos domestica</i>	Domestic duck*
<i>Anas strepera</i>	Gadwall
<i>Oxyura jamaicensis</i>	ruddy duck
CATHARTIDAE	NEW WORLD VULTURES
<i>Cathartes aura</i>	turkey vulture
ACCIPITRIDAE	HAWKS, KITES, EAGLES
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Buteo lineatus</i>	red-shouldered hawk
FALCONIDAE	FALCONS
<i>Falco sparverius</i>	American kestrel

Scientific Name	Common Name
RALLIDAE	RAILS, GALLINULES, COOTS
<i>Fulica americana</i>	American coot
CHARADRIIDAE	PLOVERS
<i>Charadrius vociferus</i>	killdeer
RECURVIROSTRIDAE	STILTS & AVOCETS
<i>Himantopus mexicanus</i>	black-necked stilt
<i>Recurvirostra americana</i>	American avocet
SCOLOPACIDAE	SANDPIPERS
<i>Actitis macularius</i>	spotted sandpiper
<i>Limnodromus sp.</i>	dowitcher
LARIDAE	SKUAS, GULLS, TERNS, SKIMMERS
<i>Larus occidentalis</i>	western gull
<i>Hydroprogne caspia</i>	Caspian tern
<i>Sterna forsteri</i>	Forster's tern
COLUMBIDAE	PIGEONS & DOVES
<i>Columba livia</i>	rock pigeon*
<i>Streptopelia decaocto</i>	Eurasian Collared-Dove*
<i>Zenaida macroura</i>	mourning dove
APODIDAE	SWIFTS
<i>Aeronautes saxatalis</i>	white-throated swift
TROCHILIDAE	HUMMINGBIRDS
<i>Archilochus alexandri</i>	black-chinned hummingbird
<i>Calypte anna</i>	Anna's hummingbird
<i>Selasphorus sasin</i>	Allen's hummingbird
ALCEDINIDAE	KINGFISHERS
<i>Megaceryle alcyon</i>	belted kingfisher
PICIDAE	WOODPECKERS
<i>Picoides nuttallii</i>	Nuttall's woodpecker
<i>Picoides pubescens</i>	downy woodpecker
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Empidonax traillii</i>	willow flycatcher
<i>Myiarchus cinerascens</i>	ash-throated flycatcher
<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Tyrannus verticalis</i>	western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
PSITTACIDAE	NEOTROPICAL PARROTS
<i>Amazona viridigenalis</i>	Red-crowned parrot*
HIRUNDINIDAE	SWALLOWS
<i>Petrochelidon pyrrhonota</i>	cliff swallow
<i>Hirundo rustica</i>	barn swallow

Scientific Name	Common Name
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow
CORVIDAE	JAYS & CROWS
<i>Apelocoma californica</i>	Western scrub-jay
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	common raven
PLOCEIDAE	WEAVERS
<i>Euplectes franciscanus</i>	orange bishop*
AEGITHALIDAE	BUSHTITS
<i>Psaltiriparus minimus</i>	bushtit
TROGLODYTIDAE	WRENS
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Troglodytes aedon</i>	house wren
REGULIDAE	KINGLETS
<i>Regulus calendula</i>	ruby-crowned kinglet
TURDIDAE	THRUSHES
<i>Catharus ustulatus</i>	Swainson's thrush
MIMIDAE	MOCKINGBIRDS, THRASHERS
<i>Mimus polyglottos</i>	northern mockingbird
PTILOGONATIDAE	SILKY-FLYCATCHERS
<i>Phainopepla nitens</i>	phainopepla
STURNIDAE	STARLINGS
<i>Sturnus vulgaris</i>	European starling*
VIREONIDAE	VIREOS
<i>Vireo bellii pusillus</i>	least Bell's vireo
<i>Vireo gilvus</i>	warbling vireo
PARULIDAE	WOOD WARBLERS
<i>Oreothlypis celata</i>	orange-crowned warbler
<i>Setophaga petechia</i>	yellow warbler
<i>Setophaga townsendi</i>	Townsend's warbler
<i>Cardellina pusilla</i>	Wilson's warbler
<i>Geothlypis trichas</i>	common yellowthroat
<i>Icteria virens</i>	yellow-breasted chat
ICTERIDAE	BLACKBIRDS
<i>Agelaius phoeniceus</i>	red-winged blackbird
<i>Icterus cucullatus</i>	hooded oriole
<i>Icterus bullockii</i>	Bullock's oriole
<i>Quiscalus mexicanus</i>	great-tailed grackle
<i>Molothrus ater</i>	brown-headed cowbird*
EMBERIZIDAE	EMBERIZIDS
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i>	California towhee

Scientific Name	Common Name
<i>Pipilo maculatus</i>	spotted towhee
CARDINALIDAE	CARDINALS
<i>Pheucticus melanocephalus</i>	black-headed grosbeak
<i>Passerina caerulea</i>	blue grosbeak
FRINGILLIDAE	FINCHES
<i>Spinus psaltria</i>	lesser goldfinch
<i>Spinus tristis</i>	American goldfinch
<i>Carpodacus mexicanus</i>	house finch
ESTRILDIDAE	ESTRILDID FINCHES
<i>Lonchura punctulata</i>	nutmeg manikin*
PASSERIDAE	OLD WORLD SPARROWS
<i>Passer domesticus</i>	house sparrow*
CLASS MAMMALIA	MAMMALS
LEPORIDAE	HARES & RABBITS
<i>Sylvilagus audubonii</i>	desert cottontail
SCIURIDAE	SQUIRRELS
<i>Sciurus niger</i>	eastern fox squirrel*
CANIDAE	WOLVES & FOXES
<i>Canis latrans</i>	coyote
FELIDAE	CATS
<i>Felis catus</i>	domestic cat*
PROCYONIDAE	RACCOONS
<i>Procyon lotor</i>	raccoon

* Non-native species

ATTACHMENT 7 – Site Photographs

ATTACHMENT 7 –PHOTO PAGES



Photo 1: Photo was taken facing east and depicts the Sawpit Wash riparian area.



Photo 2: Photo was taken facing south. The photo depicts the dense willow canopy in the Sawpit Wash riparian area.



Photo 3: Photo was taken facing east looking at Sawpit Wash and the dense willow canopy.

ATTACHMENT 7 –PHOTO PAGES



Photo 4: Photo was taken facing west looking at the Sawpit Wash riparian zone. The area consists of dense willows, cocklebur and tall grasses.



Photo 5: Photo was taken facing west looking at the Santa Anita Wash riparian area.



Photo 6: Photo was taken facing west looking at the Santa Anita Wash riparian area after the fire. The orange/brown color is the trees and shrubs that have been burned.

ATTACHMENT 7 –PHOTO PAGES



Photo 7: Photo was taken facing south depicting the Santa Anita Wash bed and dense willow cover.



Photo 8: Photo was taken facing south depicting the extensive fire damage to the Santa Anita Wash.



Photo 9: Photo was facing north looking at the emergent willows in the Santa Anita Wash.

ATTACHMENT 7 –PHOTO PAGES



Photo 10: This photo was taken facing north just north of photo number 9. Some emergent willows remain near the water in an approximate 80 by 10 feet area.



Photo 11: Photo was taken facing north from the basin looking at the mouth of Santa Anita Creek.



Photo 12: Photo was facing west looking at the burned canopy of one of the LBVI territories in the Santa Anita Wash.

ATTACHMENT 8 – Burn Area Map

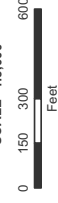


Attachment 8 **Peck Water Conservation** **Improvement Project** **LBVI/SWFL** **Burn Area Map**

Version Date: 12/17/2013



SCALE= 1:5,000



Source: Esri, DigitalGlobe, GeoEye, AeroCast, USDA, USGS, AeroGRID, IGN, SRTM30, and the GIS User Community
 Service Layer Credits: Copyright © 2013 Esri, Delorme, NAVTEQ, TomTom

APPENDIX D – RESULTS OF THE FOCUSED PLANT SURVEY





September 20, 2013
(20584)

Alison Wong
County of Los Angeles Department of Public Works
900 South Fremont Avenue
Alhambra, California 91803

SUBJECT: RESULTS OF THE FOCUSED PLANT SURVEY CONDUCTED FOR THE PECK WATER CONSERVATION IMPROVEMENT PROJECT, CITY OF ARCADIA, LOS ANGELES COUNTY, CALIFORNIA.

Dear Ms. Wong:

The purpose of this memo report is to summarize the results of the focused plant survey conducted at the Peck Road Spreading Basin located in the city of Arcadia, Los Angeles County. The Peck Road Spreading Basin is one of two sites for the Peck Water Conservation Improvement Project: Peck Road Spreading Basin site and the San Gabriel site. Focused plant surveys were conducted at the Peck Road Spreading Basin site located off of Peck Road and Rio Hondo Parkway.

The Peck Road Spreading Basin site is located on the California United States Geological Survey (USGS) 7.5-minute *El Monte* topographic quadrangle (Attachment 1). The Peck Road Spreading Basin consists of a water basin that spans over three quarter mile in length by a quarter mile wide in a former mining pit. The basin is surrounded by a golf course and private residences to the north, private residences to the west and south, and commercial industries to the east. The basin is fed by two main channels (Santa Anita Wash and Sawpit Wash) on the north side of the lake and emerging groundwater. The basin has areas of dense riparian scrub, surrounded by bare ground high along the banks and within a maintained park. The Peck Road Water Conservation Park (Peck Road Park) is used by the public for hiking and fishing, and is composed of trails and non-native vegetation including ornamental trees.

The Sawpit Wash section of the basin (northeast corner) is generally slow moving, with areas of glides and pools, with an earthen bottom and small areas of disturbance. The in-stream vegetation and banks for the majority of the stream inside of the inlet consist of dense willows and riparian scrub vegetation. The Santa Anita Wash portion of the basin (north section) consists of tall mature willow riparian cover, with no water flowing in the wash at the time of the survey. The Santa Anita Wash channel in the basin appears to be earthen with approximately 6 feet deep erosional banks on either side of the wash. However, based on communication with the County of Los Angeles Department of Public Works (LACDPW), the channel within the site is actually concrete with a heavy accumulation of sediment. Water within the basin exits south through a concrete spillway from the southwest end of the basin (Attachment 2), flows southwestwardly through a channel known as the Rio Hondo, connects with the Los Angeles River and eventually terminates into the Pacific Ocean.

METHODS

The focused plant survey was conducted by Chambers Group, Inc. (Chambers Group) botanist Rebecca Alvidrez and biologist Corey Vane on July 18 and 19, 2013. During the survey, the biologists visually scanned the entire basin area for the presence of: the federal- and state-listed endangered Nevin's barberry (*Berberis nevinii*), California Rare Plant Rank (CRPR) 1B¹ southern tarplant (*Centromadia parryi* subsp. *australis*), CRPR 2² California sawgrass (*Cladium californicum*), CRPR 2 Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*), CRPR 2 California satintail (*Imperata brevifolia*), CRPR 2 white-rabbit tobacco (*Pseudognaphalium leucocephalum*), CRPR 1B southern mountains skullcap (*Scutellaria bolanderi* subsp. *austromontana*), CRPR 1B Greata's aster (*Symphyotrichum greatae*), and CRPR 2 Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*). Two annual plants' (southern tarplant and Peruvian dodder) blooming periods are in the fall. The remaining plants are perennial species and can be identified outside the blooming period. The targeted rare plants and their blooming periods are found below.

Table 1. Targeted Sensitive Plants and Blooming Periods

Species	Blooming Period (when to survey)
Nevin's barberry	March – June (perennial)
southern tarplant	May – November (annual)
California sawgrass	June – September (perennial)
Peruvian dodder	July – October (annual)
California satintail	September – May (perennial)
white rabbit-tobacco	July – December (perennial)
southern mountains skullcap	June – August (perennial)
Greata's aster	June – October (perennial)
Sonoran maiden fern	January – September (perennial)

The surveys were conducted by walking parallel transects (30-foot centers) through the Survey Area. The Survey Area contains approximately 65 acres (not including the open water area of the Peck Road Spreading Basin or the San Gabriel site). Some habitats within the Survey Area contained dense vegetation that required transects less than 30 feet wide to appropriately cover the entire Survey Area. If a targeted plant species is observed during the survey, botanists record the location using GPS units. Representative photographs are taken of each rare plant species identified within the Survey Area. All plant species observed during the survey were recorded (Attachment 3). Plants of uncertain identity were collected and subsequently identified from keys, descriptions, and illustrations in Abrams (1923), Abrams and Ferris

¹ CRPR 1B = Plants rare and endangered in California and throughout their range.

² CRPR 2 = Plants rare, threatened or endangered in California but more common elsewhere in their range.

(1960), Baldwin et al. (2012), Clarke et al. (2007) and Munz (1974). Plant nomenclature follows that of *The Jepson Manual, Vascular Plants of California, Second Edition* (Baldwin et al. 2012).

RESULTS

Vegetation Communities

The vegetation communities identified within the Peck Road Spreading Basin Survey Area is provided below.

Southern Willow Scrub

Southern Willow Scrub is dominated by willow species (*Salix* spp.) and saplings of riparian forest (Gray and Bramlet 1992). Common dominant species of this community may include: arroyo willow (*Salix lasiolepis*) and narrow-leaf willow (*Salix exigua*) with lesser amounts of mule fat (*Baccharis salicifolia* subsp. *salicifolia*) and black willow (*Salix gooddingii*).

A large area on the northeastern corner of the Peck Road Spreading Basin Site has been mapped as Southern Willow Scrub, with lesser amounts of Southern Willow Scrub scattered along the periphery of area. Plant species found on the Peck Road Spreading Basin Site typical of this vegetation community include: California cottonweed (*Epilobium ciliatum*), velvet ash (*Fraxinus velutina*), western sycamore (*Platanus racemosa*), black willow, narrow-leaf willow, mule fat, and red willow (*Salix laevigata*). There are 16.9 acres of Southern Willow Scrub on the Peck Road Spreading Basin Site.

Disturbed Mule Fat Scrub

Mule Fat Scrub consists of dense stands of mule fat with lesser amounts of willow species. This community usually occupies intermittent streambeds, seeps, and the toe of landslides where seeps develop (Gray and Bramlet 1992). Disturbed Mule Fat Scrub has a large percentage of non-natives found within this community. Species found on the Peck Road Spreading Basin Site typical of this vegetation community include: mule fat, tree tobacco, and narrow-leaf willow. This community is found in a small portion along the southwestern edge of the Peck Road Spreading Basin Site. Disturbed Mule Fat Scrub makes up the majority of the channel within the San Gabriel River Site. There are 9.04 acres of disturbed Mule Fat Scrub.

Diegan Coastal Sage Scrub

Diegan Coastal Sage Scrub is characterized by low soft-woody shrubs up to 1 meter (3.3 feet) in height. Species typical of this community are drought-deciduous and dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*) with laurel sumac (*Malosma laurina*) and white sage (*Salvia apiana*) (Holland 1986). Diegan Coastal Sage Scrub can be found on steep, xeric slopes or clay-rich soils that are slow to release water. Diegan Coastal Sage Scrub is located in small patches on the north eastern portion of Peck Road Spreading Basin Site. Plants observed on the Survey Area typical of this community include California sagebrush and California buckwheat. There are 0.08 acres of Diegan Coastal Sage Scrub.

Disturbed Freshwater Marsh

Disturbed Freshwater Marsh is described by Holland (1986) as being dominated by perennial, emergent monocot species between 13 to 16 feet in height that often form completely closed canopies. This

community is typically dominated by bulrushes (*Scirpus* sp.) and cattails (*Typha* sp.). Disturbed Freshwater Marsh typically lacks a significant current, but is permanently flooded with fresh water, where this prolonged saturation results in deep, peaty soils. This community can be found along the coast, in coastal valleys near river mouths and around the margins of lakes and springs.

Disturbed Freshwater Marsh is present within the northwestern corner of the Peck Road Spreading Basin Site bordering Southern Willow Scrub. Plant species found on the Site typical of this vegetation community include: horseweed (*Erigeron canadensis*), and willow-weed (*Persicaria lapathifolia*). There are 0.04 acres of disturbed Freshwater Marsh on the Peck Road Spreading Basin Site.

Disturbed/Developed

Developed areas are areas that have been altered by humans and now display man-made structures such as houses, paved roads, buildings, parks, and other maintained areas. Disturbed areas are mostly devoid of vegetation due to recent disturbances. The small amount of vegetation that begins to reclaim the soil is dominated by non-native, weedy species adapted to frequent disturbance. Species found on the Peck Road Spreading Basin Site typical of this community include: flax-leaved horseweed (*Erigeron bonariensis*), horseweed, western marsh cudweed (*Gnaphalium palustre*), telegraph weed (*Heterotheca grandiflora*), prickly lettuce (*Lactuca serriola*), cheeseweed (*Malva parviflora*), everlasting cudweed (*Pseudognaphalium luteoalbum*), and common groundsel (*Senecio vulgaris*). Areas within the Peck Road Spreading Basin Site and the San Gabriel River Site that are made up of Disturbed/Developed include upper slopes of the basins. Disturbed/Developed areas are 38.34 acres of both Sites. In addition, Peck Road Water Conservation Park (public park) is identified as a Developed area, and consists of an additional 15.16 acres within the Peck Road Spreading Basin Site. The Peck Road Conservation Park was not included in this survey effort.

Invasive Exotic Vegetation

Exotic Vegetation consists of areas where the vegetation is dominated by non-native horticultural plants used for landscaping that were not originally planted but may have been located nearby and have escaped to colonize the Site (Gray and Bramlet 1992). Typically, the species composition consists of introduced trees, shrubs, flowers and turf grass.

Large patches of exotic vegetation have been mapped throughout the Peck Road Spreading Basin Site. Smaller patches of scattered castor bean (*Ricinus communis*), exotic palm saplings, short-pod mustard, and passion fruit, and giant reed (*Arundo donax*) were also present within the Southern Willow Scrub community and have not been mapped (primarily isolated individuals). Plant species found on the Site within this community include: crimson bottlebrush tree (*Callistemon citrinus*), deodar cedar tree (*Cedrus deodara*), carrotwood tree (*Cupaniopsis anacardioides*), blue gum tree (*Eucalyptus globules*), Chinese flame tree (*Koelreuteria bipinnata*), white mulberry tree (*Morus alba*), allepo pine (*Pinus halepensis*), castor bean, Peruvian pepper tree (*Schinus molle*), and Mediterranean tamarisk (*Tamarix ramosissima*). There are 0.68 acres of Exotic Vegetation on the Peck Road Spreading Basin Site.

Rare Plant Survey Results

A total of 127 common plant species were observed within the basin area during the survey (Attachment 3). One species was taken to the Rancho Santa Ana Botanical Gardens to compare to their Peruvian dodder specimen. This species was identified as field dodder (*Cuscuta campestris*), a non-sensitive species. No

sensitive plant species were observed during the survey, which was conducted for the annual species during the appropriate blooming period when each species would be identifiable and conspicuous.

Santa Anita Wash Fire

During the weekend of July 19 to 21, 2013, a five-acre fire burned approximately 80 percent of the habitat within the Santa Anita Wash riparian area. Small patches of vegetation remain along the water edge and within the western corner near the golf course. According to the local transients, the fire was started by two teenage boys who were spotted lighting willow fluff on fire. A map of the burn area is provided in Attachment 4.

CONCLUSIONS

The 10 sensitive plant species listed above were not observed during the survey; therefore, these species are considered absent from the Peck Road Spreading Basin area. No further surveys for sensitive plant species are recommended at this time.

Please contact me at (213) 623-1859 ext. 7504 if you have any questions or concerns regarding this memo.

Sincerely,



Rebecca Alvidrez
Staff Biologist/Botanist
ralvidrez@chambersgroupinc.com

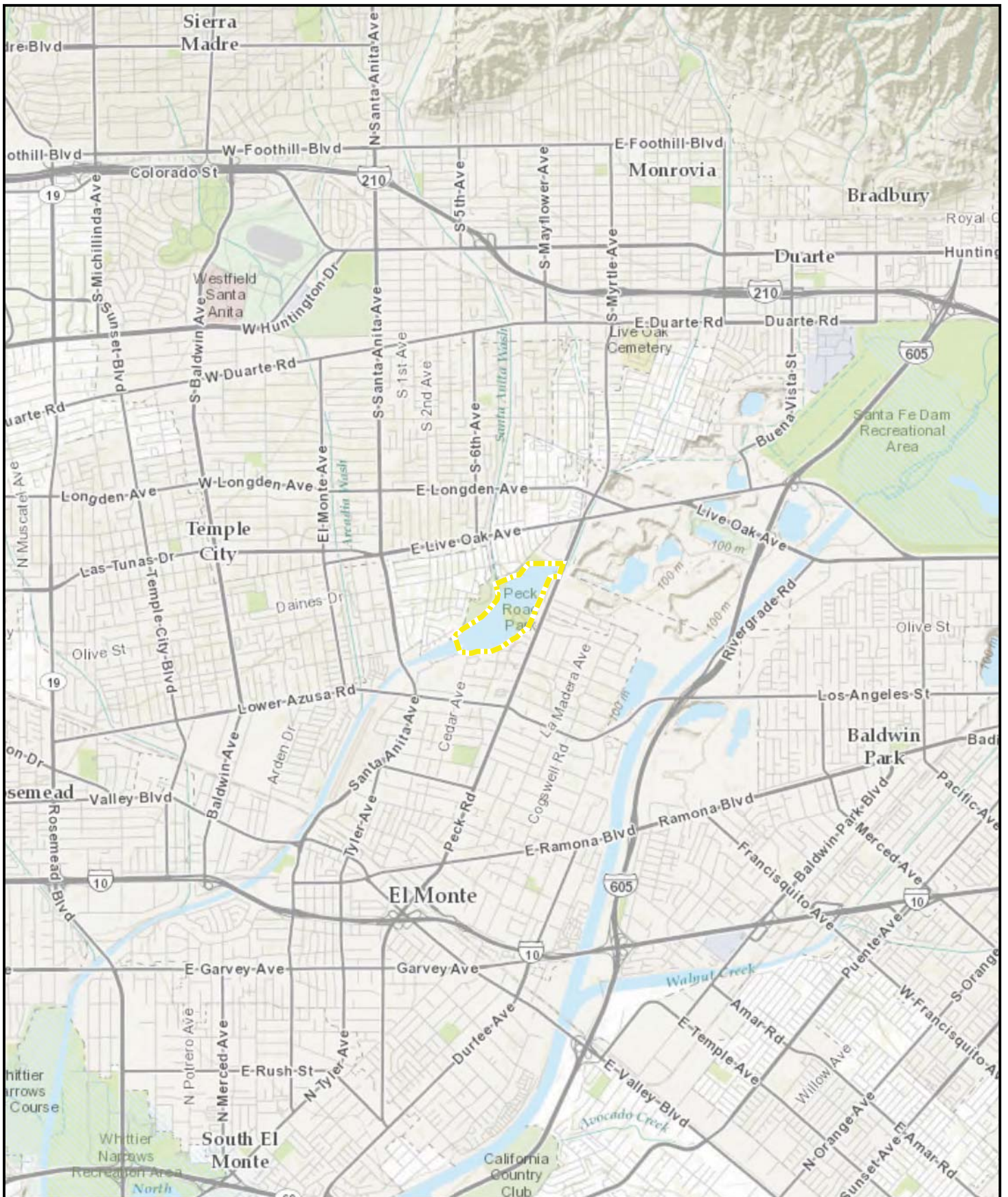
ATTACHMENTS


Attachment 1 – Project Vicinity Map
Attachment 2 – Project Location Map
Attachment 3 – Plant Species Observed
Attachment 4 – Burn Area Map

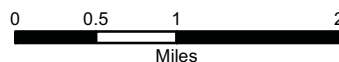
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ATTACHMENT 1 – PROJECT VICINITY MAP

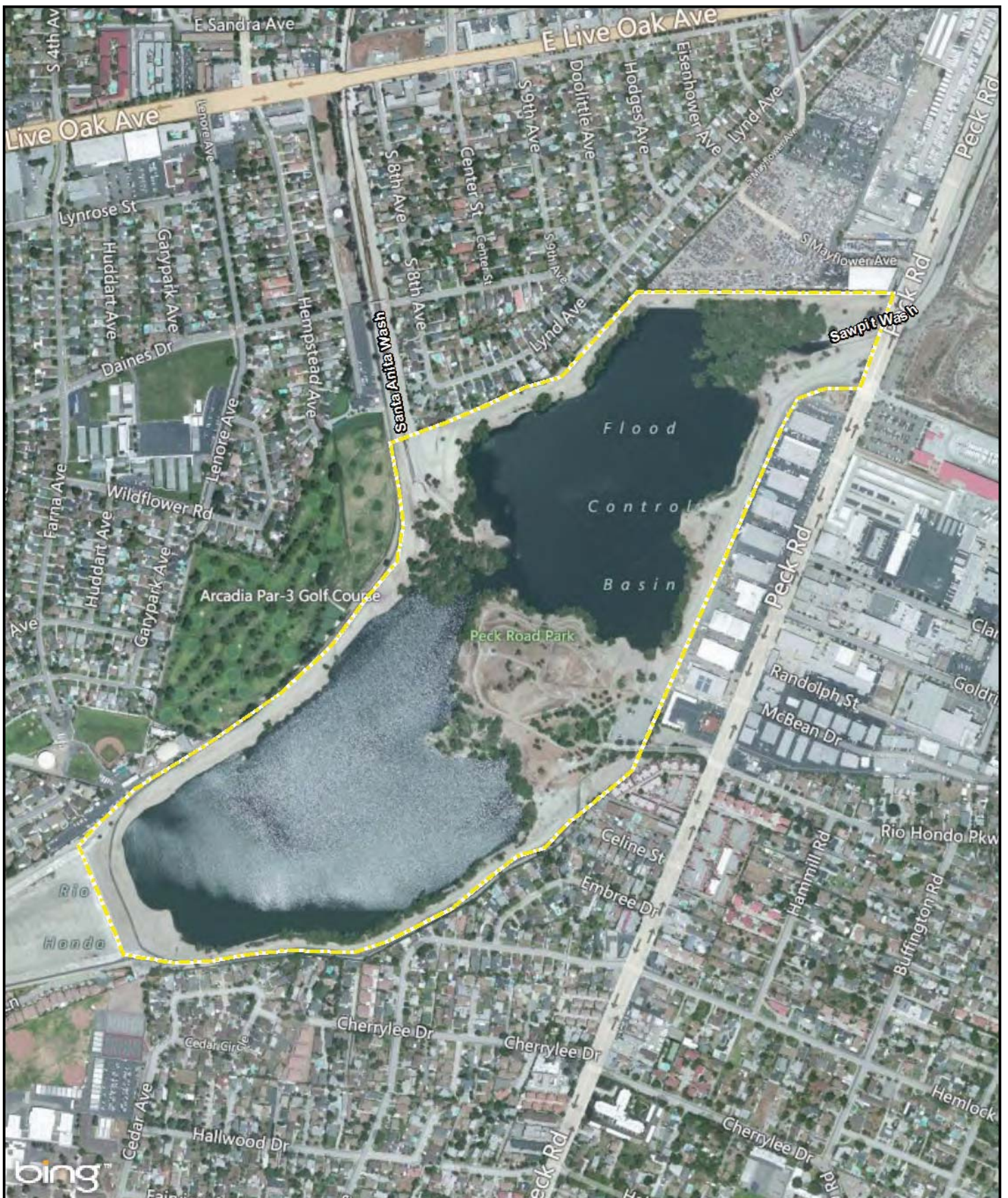



 Peck Road Spreading Basin



Attachment 1 **Peck Water Conservation Improvement Project** **Focused Plant Survey** **Project Vicinity**

ATTACHMENT 2 – PROJECT LOCATION MAP



 Survey Area



0 1,000 2,000
Feet

Attachment 2

Peck Water Conservation Improvement Project Focused Plant Survey Project Location

Name: 20584 Attach2 Project Location Focused Plant Survey.Mxd
Print Date: 9/13/2013, Author: jaynes



ATTACHMENT 3 – PLANT SPECIES OBSERVED

ATTACHMENT 3 –PHOTO PAGES



Photo 1: Photo was taken facing east and depicts the Sawpit Wash riparian area.



Photo 2: Photo was taken facing south. The photo depicts the dense willow canopy in the Sawpit Wash riparian area.



Photo 3: Photo was taken facing east looking at Sawpit Wash and the dense willow canopy.

ATTACHMENT 3 –PHOTO PAGES



Photo 4: Photo was taken facing west looking at the Sawpit Wash riparian zone. The area consists of dense willows, cocklebur and tall grasses.



Photo 5: Photo was taken facing west looking at the Santa Anita Wash riparian area.



Photo 6: Photo was taken facing west looking at the Santa Anita Wash riparian area after the fire. The orange/brown color is the trees and shrubs that have been burned.

ATTACHMENT 3 –PHOTO PAGES



Photo 7: Photo was taken facing south depicting the Santa Anita Wash bed and dense willow cover.



Photo 8: Photo was taken facing south depicting the extensive fire damage to the Santa Anita Wash.



Photo 9: Photo was facing north looking at the emergent willows in the Santa Anita Wash.

ATTACHMENT 3 –PHOTO PAGES



Photo 10: This photo was taken facing north just north of photo number 9. Some emergent willows remain near the water in an approximate 80 by 10 feet area.



Photo 11: Photo was taken facing north from the basin looking at the mouth of Santa Anita Creek.



Photo 12: Photo was facing west looking at the burned canopy of in the Santa Anita Wash.

ATTACHMENT 4 – BURN AREA MAP

APPENDIX E – ARCHAEOLOGICAL SURVEY REPORT



**ARCHAEOLOGICAL SURVEY REPORT
FOR THE PECK WATER CONSERVATION
IMPROVEMENT PROJECT**

County of Los Angeles
Department of Public Works

Prepared for:

**COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
WATER RESOURCES DIVISION**

Prepared by:

CHAMBERS GROUP, INC.
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September 2013

Keywords: Cultural resources survey; Negative survey; County of Los Angeles; *El Monte* and *Baldwin Park* quadrangle; San Francisco Dalton Land Grant.

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MANAGEMENT SUMMARY

Purpose and Scope: Chambers Group, Inc. (Chambers Group) was retained by the County of Los Angeles Department of Public Works (LACDPW), to conduct a cultural resources and paleontological study in support of the Peck Water Conservation Project (Project) located in eastern County of Los Angeles, California. The Project area is located within the cities of Arcadia and Irwindale. Chambers Group's study consisted of a cultural resources record and literature search, Native American coordination, a vertebrate paleontological resources record, and literature search and an intensive pedestrian survey of the Project area for cultural resources. This report documents the results of this study.

Dates of Investigation: Chambers Group initiated coordination with Native American groups and requested a cultural resources records search for the Project in July and August 2013. The Native American Heritage Commission responded on February 12, 2014; this response included a list of Native American contacts. Letters were sent to these Native American contacts on February 14, 2014. Chambers Group Cultural Resource Specialist Ms. Katherine Crosmer completed the California Historical Resources Information System (CHRIS) records search. Chambers Group Cultural Resource Specialist Charles Cisneros conducted an intensive pedestrian survey of the Project area in July 2013. A vertebrate paleontological record search was conducted by the Natural History Museum of County of Los Angeles in August 2013.

Findings of Investigation: The Native American Heritage Commission's search of its Sacred Lands File did not indicate the presence of Native American cultural resources within the 0.8 km (0.5 mile) of the project area. The CHRIS records search identified 14 prior cultural resource studies within 0.8 km (0.5-mile) of the Project area. Although the Project area did not contain any previously recorded cultural resources, the CHRIS records search identified four historic period cultural resources within the 0.8-km (0.5-mile) radius of the Project area. During the cultural resources survey, Chambers Group did not identify prehistoric materials, historic-era materials, or built environment resources dating to the ethnographic or historic periods within the Project area. The Natural History Museum of County of Los Angeles vertebrate paleontological record search did not identify any fossil localities within the Project area.

Investigation Constraints: Ground visibility was generally good throughout the Project area. The Project area is in a highly disturbed context and the likelihood of encountering previously unrecorded resources is low.

Recommendations Summary: The results of this study indicate that the Project area was negative for cultural and paleontological resources. Therefore, Chambers Group recommends no additional cultural or paleontological resources work for this Project at this time. In the event that cultural or paleontological resources are discovered during ground-disturbing activities, Project personnel should halt earth-moving activities in the immediate area and notify a qualified archaeologist and/or paleontologist to evaluate the resource.

Disposition of Data: This report will be on file with the following entities: the South Central Coastal Information Center (SCCIC) located at the California State University, Fullerton; County of Los Angeles Department of Public Works; and Chambers Group, Inc. All field notes and records related to the current project are on file at the Santa Ana Office of Chambers Group, Inc.

SECTION 1.0 – INTRODUCTION

Chambers Group, Inc. (Chambers Group) was retained by the County of Los Angeles Department of Public Works (LACDPW) to conduct a cultural resources and paleontological resources study in support of the proposed Peck Road Spreading Basin Project (Project). The study consisted of a cultural resources record and literature search, Native American consultation, a paleontological resources record search, cultural resources survey of the Project area, and the preparation of a technical report documenting the results of the study and providing management recommendations.

The study was completed to comply with the provisions of the California Environmental Quality Act (CEQA), including the CEQA Statutes (Public Resources Code [PRC] §§ 21083.2 and 21084.1), the CEQA Guidelines (Title 14 California Code of Regulations [CCR], § 15064.5), and PRC § 5024.1 (Title 14 CCR § 4850 et seq.). These statutes and regulations, as amended, are summarized in an annually updated handbook (Association of Environmental Professionals 2012). Properties expected to be directly or indirectly affected by a proposed project must be evaluated for California Register of Historical Resources (CRHR) eligibility (PRC § 5024.1). The purpose of the CRHR is to maintain listings of the state's historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from material impairment and substantial adverse change.

The term historical resources includes a resource listed in, or determined to be eligible for listing in, the CRHR; a resource included in a local register of historical resources; and any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (CCR § 15064.5[a]). The criteria for listing properties in the CRHR were expressly developed in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP).

The California Office of Historic Preservation (OHP 1995:2) regards “any physical evidence of human activities over 45 years old” as meriting recordation and evaluation. According to PRC § 5024.1(c) (1–4), a resource may be considered historically significant if it retains integrity and meets at least one of the following criteria. A property may be listed in the CRHR if the resource

- is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- is associated with the lives of persons important in our past;
- embodies the distinctive characteristics of a type, period, region, or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or
- has yielded, or may be likely to yield, information important in prehistory or history.

Under CEQA, if an archeological site is not a historical resource but meets the definition of a “unique archeological resource” as defined in PRC § 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined as follows:

- An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type
- Is directly associated with a scientifically recognized important prehistoric or historic event or person

Resources that neither meet any of these criteria for listing in the CRHR nor qualify as a “unique archaeological resource” under CEQA PRC § 21083.2 are viewed as not significant. Under CEQA, “A non-unique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects” (PRC § 21083.2[h]).

Impacts that adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. Impacts to historical resources from a proposed project are thus considered significant if the project (1) physically destroys or damages all or part of a resource, (2) changes the character of the use of the resource or physical feature within the setting of the resource, which contributes to its significance; or (3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

This report was completed by Chambers Group Cultural Resource Specialist, Charles Cisneros, M.S., and Registered Professional Archaeologist (RPA). This report was reviewed for quality assurance/quality control (QA/QC) by Cultural Resources Principal Investigator, Wayne Bischoff, Ph.D. The project was managed by Paula Fell; M.S. Charles Cisneros conducted the field survey of the Project area. Geographic Information Systems (GIS) Analyst, Jessica Jaynes, M.S., prepared all of the report figures.

1.1 PROJECT LOCATION

The Project area includes an approximately 2,134-meter (m) (7,000-foot) linear section of land and the 10.05-acre (4.07-hectares) sediment removal area located in the cities of Irwindale and Arcadia, Los Angeles County, California (Figure 1 and Figure 2). Specifically, the Project area is situated in the San Francisquito Dalton land grant portion of the *Baldwin Park* and *El Monte*, California 7.5-minute United States Geological Survey (USGS) quadrangle. Geographically, the Project area is bounded by the San Gabriel Mountains to the north, San Gabriel River to the east, Workman Hill to the south, and Flint Peak to the west.

Figure 1: Project Location Map (Topographic)

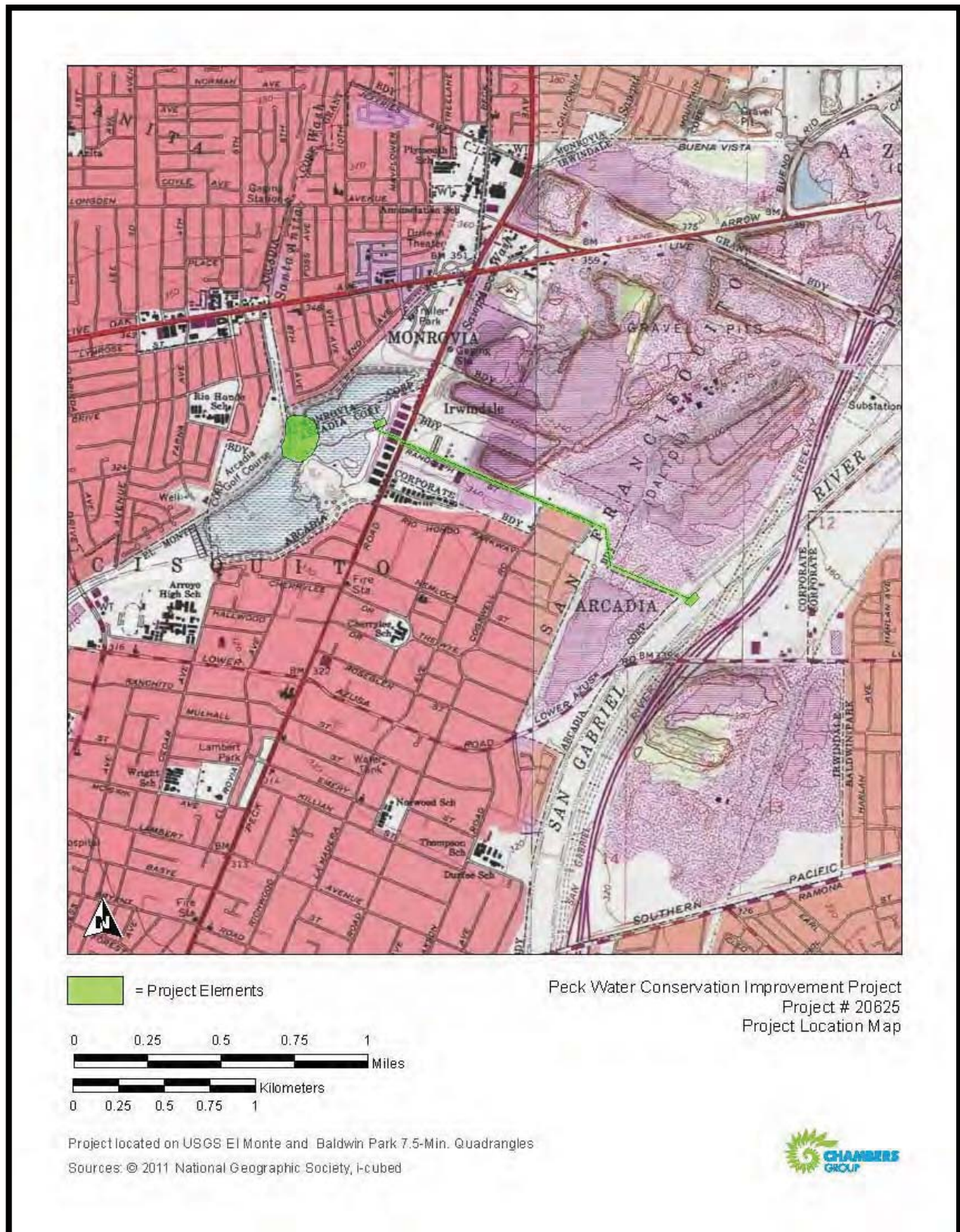
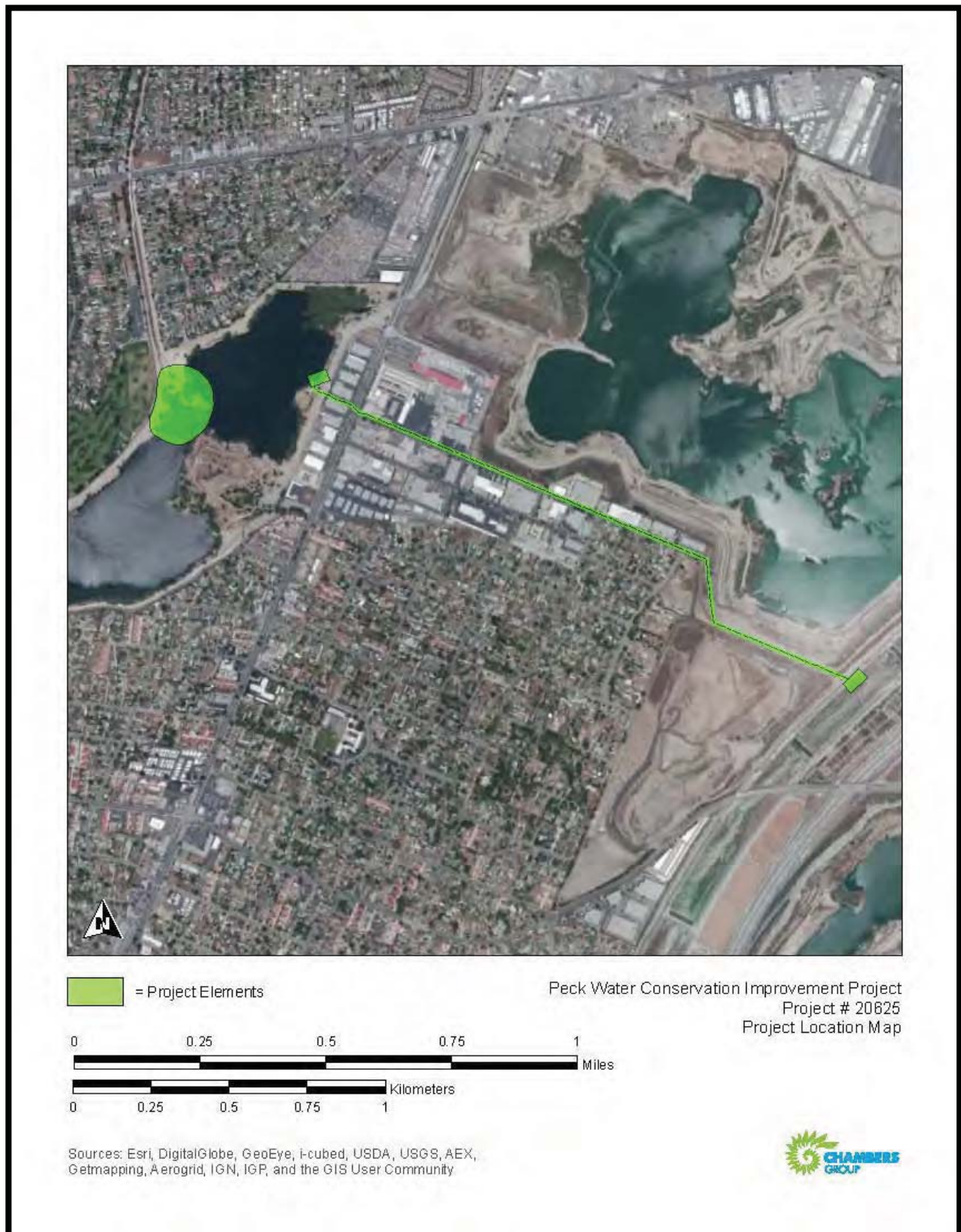


Figure 2: Project Location Map (Aerial)



1.2 PROJECT DESCRIPTION

The Peck Road Spreading Basin has been adversely affected by sediment brought in by storm flows over the years that have accumulated south of the Santa Anita Wash outlet and west of the Sawpit Wash outlet. This sediment accumulation restricts water flows, increasing the risk of upstream flooding, and causes a separation between the northern and southern portions of the spreading basin, decreasing the overall storage capacity. Additionally, the spreading basin's percolation rate into the Main San Gabriel Groundwater Basin is reduced due to an underlying clay layer. Water exits the spreading basin into the concrete-lined Rio Hondo channel. High uncontrolled flows from Santa Anita and Sawpit washes can cause the basin to fill up quickly and allow the water to be wasted through the concrete-lined Rio Hondo Channel to the ocean.

The proposed Project has been designed to address these adverse conditions. The proposed Project will excavate and remove accumulated sediment within the spreading basin, thereby removing water flow constrictions and increasing storage capacity. The proposed Project also involves the construction of a pump station and a 7,000-foot pipeline that connects to an outlet structure into the San Gabriel River. The San Gabriel River has much greater percolation rates and also percolates into the Main San Gabriel Groundwater Basin, which will improve water supply sustainability efforts.

Chambers Group is responsible for:

- CEQA Environmental documentation
- Biological surveys
- Cultural surveys
- Project management
- Subcontractors oversight
- Ongoing coordination with LACDPW

SECTION 2.0 – ENVIRONMENTAL SECTION

The landscape features of the Project area are an excellent record of urban development. As a result, the Project area is in a relatively disturbed context, primarily from sediment accumulation (Figure 3), residential homes (Figure 4), local businesses (Figure 5), the nearby Hanson Quarry (Figure 6), and the Peck Road Spreading Basin and Water Conservation Park (Figure 7). Modern refuse is also scattered throughout portions of the Project area.

Topographically, the Project area is virtually flat, with elevations ranging from 89 to 111 m (290 to 365 feet) above mean sea level (amsl) and a west-facing aspect along an approximate gradient of 1 percent. Additional nearby topographic features include the San Gabriel Mountains and the San Gabriel River.

Sandy to gravelly soil is present within portions of the Project area. Significant surficial sheet flow from the nearby northern foothills may traverse the Project area during periods of considerable precipitation. Such flow in the Project area eventually drains to the Peck Road Spreading Basin and the San Gabriel River. The vegetation in the Project area includes riparian vegetation (Figure 8), chaparral and disturbed/ruderal grasses (Figure 9).



**Figure 3:
Sediment
accumulation
within the
Project area
(view to the
southeast)**



Figure 4:
Residential
homes near the
Project area
(view to the
southeast).



Figure 5: Local
business near
the Project
Area (view to
the south).



**Figure 6:
Hanson Quarry
(view to the
northeast)**



**Figure 7: Peck
Road
Spreading
Basin and
Water
Conservation
Park (view to
the northwest)**



Figure 8:
Riparian
vegetation
within the
Project Area
(view to the
southeast)



Figure 9:
Vegetation
within the
Project area
(view to the
east).

SECTION 3.0 – CULTURAL SETTING

3.1 PREHISTORIC OVERVIEW

Southern California has a long history of human occupation, with dates of the earliest evidence of human occupation during the late Pleistocene, ca. 11,000 years B.C. (Glassow et al. 2007: 191). Prehistoric material culture in the state's southern region has been categorized according to periods or patterns that define technological, economic, social, and ideological elements. Within these periods, archaeologists have defined cultural patterns or complexes specific to prehistory within the state's southern region, including the Project area.

Table 1 illustrates the chronological framework developed for southern California. This framework is divided into four major periods: Paleoindian period (ca. 11,000 to 7000 B.C.), Millingstone period (7000 B.C. to 3000 B.C.), Intermediate period (3000 B.C. to A.D. 500), and Late Prehistoric period (A.D. 500 to Historic Contact). Within these broad temporal periods are variations in the timing and nomenclature of cultural complexes for the region. The timescales referenced in the following discussion are presented as calendar dates (years B.C. /A.D.).

Table 1: Chronological Framework for Southern California

Period	Years (B.C.–A.D.)
Paleoindian Period	11,000 — 7000 B.C.
Millingstone Period	7000 — 3000 B.C.
Intermediate Period	3000 B.C. — A.D. 500
Late Prehistoric Period	A.D. 500 — Historic Contact

3.1.1 Paleoindian Period (11,000 – 7000 B.C.)

Recent data from coastal and inland sites during this period indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas (e.g., Jones et al. 2002) and on Pleistocene lakeshores in eastern San Diego County (Moratto 1984:90–92). Although few Clovis-like or Folsom-like fluted points have been found in southern California, it is widely thought that a greater emphasis on hunting occurred at near-coastal and inland sites during the Paleoindian Period than in later periods (e.g., Dillon 2002; Erlandson et al. 1987). Subsistence patterns shifted around 6000 B.C., coincident with the gradual desiccation associated with the onset of the Altithermal, a warm and dry period that lasted for about 3,000 years. As the climate changed, a greater emphasis was placed on plant foods and small animals.

3.1.2 Millingstone Period (7000 – 3000 B.C.)

The Milling Stone Period (Wallace 1955, 1978) is the earliest well-established period of occupation in southern California (Glassow et al. 2007: 192), characterized by an ecological adaptation to collecting, accompanied by a dependence on ground stone implements associated with the horizontal motion of grinding small seeds: milling stones (metates, slabs) and hand stones (manos, mullers). Milling stones

are found in large numbers for the first time and become more numerous toward the end of this period. As evidenced by their tool kits and shell middens in coastal sites, people during this period practiced a mixed food-procurement strategy. Subsistence patterns became more specialized as groups became better adapted to their regional or local environments.

Projectile points from the period are relatively rare, but are large and generally leaf-shaped, and were probably employed with darts or spears thrown with atlatls. Bone tools, such as awls, and items made from shell, including beads, pendants, and abalone dishes, are also quite uncommon. Evidence of weaving or basketry is present at a few sites. The mortar and pestle, associated with the vertical motion of pounding foods such as acorns, were introduced during the Milling Stone Period but do not become common until the Intermediate Period.

3.1.3 Intermediate Period (3000 B.C. – A.D. 500)

The Intermediate Period is characterized by a shift toward a hunting and maritime subsistence strategy, along with use of a wider range of plant foods. During this period, a pronounced trend toward greater adaptation to regional or local resources can be observed. For example, the remains of fish, land mammals, and marine mammals are increasingly abundant and diverse in sites along the southern California coast. Chipped stone tools suitable for hunting are more common and both stylistically and technologically varied. Projectile points include large side-notched, stemmed, and lanceolate or leaf-shaped forms. Koerper and Drover (1983) consider Gypsum Cave and Elko series points, which have a wide distribution in the Great Basin and Mojave deserts between ca. 2000 B.C. to A.D. 500, diagnostic of this period. Larger knives, a variety of stone flake scrapers, and drill-like implements are common during this period. Shell fishhooks become an integral part of the tool kit. Bone tools, including awls, are more numerous than in the preceding period; and the use of asphaltum adhesive becomes more common.

3.1.4 Late Prehistoric Period (A.D. 500 – 1769)

During the Late Prehistoric Period, use of plant food resources increased in conjunction with land and marine mammal hunting. The variety and complexity of material culture also increased during this period, demonstrated by more diverse classes of artifacts. The recovery of a large number of small, finely chipped projectile points, usually stemless with convex or concave bases, suggests an increased utilization of the bow and arrow for hunting rather than the atlatl and dart.

During this period, an increase in population size is accompanied by the advent of larger, more permanent villages with greater numbers of inhabitants (Wallace 1955:223). Some coastal and near-coastal settlements were occupied by as many as 1,500 people. Many of these larger settlements were permanent villages where at least some people resided year-round. The populations of these villages may have also increased seasonally.

3.2 ETHNOGRAPHY

3.2.1 Tongva (Gabrielino)

The Project area was occupied by the Native American group known as the Tongva/Gabrielino. The name “Gabrielino” denotes those people who were administered by the Spanish from Mission San Gabriel, which included people from the Gabrielino group proper, as well as other social groups (Bean and Smith 1978; Kroeber 1925). The post-contact period name therefore does not necessarily identify a

specific ethnic or tribal group. The names Native Americans in southern California used to identify themselves have, for the most part, been lost. Many contemporary Gabrielino identify themselves as descendents of the indigenous people living across the plains of the Los Angeles Basin and refer to themselves as the *Tongva*.

Gabrielino lands encompassed the greater Los Angeles Basin and three Channel Islands: San Clemente, San Nicolas, and Santa Catalina. Inland, their territory was bounded on the north by the Chumash at Topanga Creek, the Serrano at the San Gabriel Mountains in the east, and the Juaneño on the south at Aliso Creek (Bean and Smith 1978:538; Kroeber 1925:636).

The Tongva established large, permanent villages in the fertile lowlands along rivers and streams and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. Tongva population had significantly dwindled due to introduced diseases and dietary deficiencies as a result of European contact. By the early 1900s few Tongva people had survived, and much of their culture had been lost (Bean and Smith 1978; McCawley 1996; Miller 1991; however, in the 1970s, a revival of the Tongva culture began which continues today with growing interest and support.

3.3 HISTORIC PERIOD

Post-contact history for the state of California is generally divided into three periods: (1) the Spanish period (1769 to 1822), (2) the Mexican period (1822 to 1848), and (3) the American period (1848 to present). Although Spanish, Russian, and British explorers made brief visits from 1529 to 1769, the Spanish period in California began with the establishment of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain marks the beginning of the Mexican period; and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, signals the beginning of the American period, when California became a territory of the United States.

3.3.1 The Mission Period (1769 – 1822)

The first significant European settlement of California began during the Mission Period (1769 to 1822) with the founding of the first mission in San Diego and lasted until 1833/34 when the Mexican secularization laws effectively opened the area to social and economic growth. The establishment of San Gabriel and San Juan Capistrano missions in 1771 and 1776, respectively, had a number of impacts on the region. The Tongva were removed from their villages and resettled around the missions. This resulted in the abandonment of some areas and the agricultural and ranching development of other portions. The mission system was dismantled after Mexican governors introduced new secularization acts between 1822 and 1833, thus freeing the Indians from mission control.

3.3.2 The Rancho Period (1821 – 1847)

After secularization, the dominance of the large land grant ranchos became established. In 1810, the Spanish government granted the first rancho to Jose Antonio Yorba and his nephew Juan Pablo Peralta. The Mexican government granted ranchos throughout California to Spanish and Hispanic soldiers and settlers (Castillo 1978). During this period, the entire area was almost constantly involved in political and military revolts. The tense situation ended when in 1847 California gained independence from Mexico during the “Bear Flag” revolt. One year later, the United States gained control of the area as a result of the Mexican-American War.

3.3.3 The American Period (1848 – Present)

Although southern California has been under the control of the United States since 1847, the American Period did not really begin in the study area until 1851, when the Land Act required rancho dons to confirm the ownership of their lands. Many rancho dons lacked funds and legal documents to confirm land ownership. Along with legal problems related to the Land Act and new taxes imposed by the United States, many second-generation dons experienced a disastrous two-year drought (McWilliams 1973:62). The combination of these hardships resulted in many rancho families losing their lands. A steady influx of Euro-Americans was brought in by the railroads. The Euro-Americans expanded commercial and land development primarily in farming and dairy endeavors. In the twentieth century, independent businesses began to dominate the economic strategy, much as they do today.

SECTION 4.0 – RECORDS SEARCH RESULTS

4.1 CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM RECORD SEARCH

The South Central Coast Information Center (SCCIC), located on the campus of California State University, Fullerton, houses records of the California Historical Resources Information System (CHRIS) for Los Angeles and Ventura counties. Chambers Group requested a CHRIS cultural resources records search for the Project area in July 2013. The records search included a 0.8-km (0.5-mile) radius around the Project area (Study Area) and was conducted by Chambers Group Cultural Resource Specialist Katherine Crosmer. The purpose of the literature search was to identify prehistoric or historic archaeological sites or historic buildings and structures previously recorded within and around the Project area. Ms. Crosmer also reviewed the NRHP and Archaeological Determinations of Eligibility as well as numerous historic maps for the presence of possible historic structures or archaeological site locations, covering a date range from 1892 through 1957. The records were reviewed to (1) identify cultural resources within the Project area and surrounding area, (2) identify and determine the adequacy of previous cultural resources studies in the Project area, (3) develop management recommendations for cultural resources within or adjacent to the Project area, and (4) assess what additional cultural resources studies would need to be undertaken for the proposed Project.

4.2 PRIOR CULTURAL RESOURCE STUDIES WITHIN THE STUDY AREA

The records searches identified a total of 14 prior cultural resources studies within the Study Area of 0.8 km (0.5 mile) of the Project area. One of the cultural resource studies (SCCIC Report No. LA-6859) is a block survey that crossed the current Project area in 1996. The remaining 13 cultural resources studies were located to the north, east, south, and west of the Project area and are all within the Study Area boundaries. The prior studies are listed in Table 2.

Table 2. Prior Cultural Resource Studies within the Study Area

Year	SCCIC Report Number	Author	Study	Proximity to Project Area
1974	LA-72	Clellow, W.	Evaluation of the Archaeological Resources and Potential Impact of Proposed Extension of Merced Avenue and Olive Street, City of Baldwin Park	Outside
1968	LA-2412	Swiger, C.	UCAS 086, County of Los Angeles, San Gabriel River Freeway	Outside
2000	LA-4880	Smith, P. and A. Sriro	California Department of Transportation (Caltrans): Negative Archaeology Survey Report	Outside
2001	LA-6281	Storey, N.	Caltrans: Negative Archaeology Survey Report	Outside
2001	LA-6304	Mason, R.	Cultural Resources Record Search and Literature Review Report for an American Tower Corporation Telecommunication Facility: Number LA 802 n1	Outside
1996	LA-6859	LSA	Arcadia General Plan	Within
2005	LA-8211	MBA	Cultural Resources Records Search Results and Site Visit for Cingular Telecommunications Facility Candidate EL-0150-01	Outside
2007	LA-8677	MBA	Cultural Resources Records Search and Site Visit Results for Royal Street Communications, LLC Candidate LA0425C	Outside
2006	LA-8695	MBA	Cultural Resources Records Search Results and Site Visit for T-Mobile USA Candidate IE24752	Outside
2007	LA-9705	Pacific Legacy	Cultural Resources Inventory of the Southern California Edison Company Tehachapi Renewable Transmission Project	Outside
2009	LA-10175	Applied Earthworks	Confidential Cultural Resources Specialist Report for the Tehachapi Renewal Transmission Project	Outside
2010	LA-1185	Pacific Legacy	Archaeological Survey and National Register of Historic Places and California Register of Historical Resources Evaluation of 07-H-002 and 07-H-003, Strawberry Contractor Yard, for the Southern California Edison Company Tehachapi Renewable Transmission Project Segment 7.	Outside
2010	LA-11989	Pacific Legacy	Supplemental Archaeological Survey Report, 66-kV Transmission Lines Access Roads, Tehachapi Renewable Transmission Project Segments 7 and 8	Outside
2010	LA-11990	Pacific Legacy	Supplemental Cultural Resources Survey Report for the Southern California Edison Tehachapi Renewable Transmission Project Segment 7 Rio Hondo-Amador-Jose-Mesa 66-kV Line Relocation	Outside

4.3 PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN THE STUDY AREA

Results of the records search identified four historic-period cultural resources within a 1-mile radius of the area of potential effect (APE). No previously recorded archaeological sites or isolated artifacts lie within the Project APE. The previously recorded resources in the proximity of the Study Area are listed below in Table 3.

Table 3. Previously Recorded Cultural Resources within the Study Area

Primary Number ¹	Trinomial ²	Resource Description	NRHP/CRHR Eligibility ³	Recorder and Year	Proximity to Project Area
19-3117	CA-LAN-3117H	Historic: trash scatter	Not Evaluated	Pacific Legacy. 2010	Outside
19-186876	-	Historic: transmission line	Recommended Ineligible	Becker, W. 2010	Outside
19-190506	-	Historic: transmission line	Recommended Ineligible	Becker, W. 2010	Outside
19-190510	-	Historic: aqueduct	Not Evaluated	Becker, W. 2010	Outside

1. Primary numbers are unique identifiers used by the Office of Historic Preservation to identify cultural resources.

2. Trinomial numbers are numerical identifiers assigned to archaeological sites.

3. Cultural resources, including archaeological sites, are considered eligible/ineligible based on criteria established by state and federal laws.

4.3.1 19-3117

19-3117 (CA-LAN-3117H) is a historic-period archaeological site located east of the San Gabriel River. The site was recorded in 2010 by Pacific Legacy. The site is a historic refuse scatter measuring 856 by 90 meters. The historic constituents consisted of 823 artifacts, including 500 glass fragments, 200 ceramic fragments, 100 red brick fragments, one marble, one glass doorknob, and one whiteware steamer lid. Abalone and oyster shell were also present. No archaeological features were observed.

4.3.2 19-186846

19-186846 is a historic transmission line connecting the Antelope and Mesa substations. The record for the transmission line was updated in 2010 by Urban Preservation and Planning, LLC.

4.3.3 19-190506

19-190506 is the historic Rio Hondo-Bradbury 66-kV Transmission Line. It measures approximately 3.5 miles between the existing Rio Hondo Substation and the existing Bradbury Substation. The record for the transmission line was updated in 2010 by Urban Preservation and Planning, LLC.

4.3.4 19-190510

19-190506 is the San Gabriel River Levee. The San Gabriel River Levee is of concrete construction; spans the width of the river, approximately 460 feet; and is approximately 5,480 feet in length. The record for the levee was updated in 2010 by Urban Preservation and Planning, LLC.

4.4 NATIVE AMERICAN COORDINATION

On August 1, 2013, Chambers Group requested that the Native American Heritage Commission (NAHC) conduct a search of its Sacred Lands File to determine if cultural resources important to Native Americans have been recorded in the project area. On February 12, 2014, Chambers Group received a response from the NAHC stating that the search of its Sacred Lands File did not indicate the presence of Native American cultural resources within 0.8 km (0.5 mile) of the project area.

The NAHC also provided a list of five Native American contacts for the project that may have knowledge of cultural resources near the project area. Chambers Group prepared and mailed a letter to each of the NAHC-listed contacts on February 17, 2014, requesting information related to any Native American cultural resources within or immediately adjacent to the project area. Documentation related to Native American consultation is found in Appendix A.

To date, Chambers Group has received only one response to the letters that were sent to the NAHC-listed contacts (see Appendix A). The response is from Andy Salas of the Gabrielino Band of Mission Indians. Mr. Salas has expressed interest in the project and is requesting a member of his group conduct onsite monitoring during ground disturbance.

4.5 PALEONTOLOGICAL RESOURCES RECORD SEARCH

Chambers Group requested a vertebrate paleontology records search for the Project area in August 2013. The records search included a 0.8-km (0.5-mile) radius around the Project area and was conducted by Dr. Samuel McLeod from the Natural History Museum of Los Angeles County. The purpose of the literature search was to identify fossil localities previously recorded within and around the Project area.

Dr. McLeod did not identify any vertebrate fossil localities that lie directly within the proposed Project area boundaries but did identify fossil localities nearby from sedimentary deposits similar to those that occur in the proposed Project areas.

Most of the proposed Project area has surface deposits composed predominantly of younger Quaternary gravels with some finer-grained sands, derived from the active channels of the San Gabriel River on the east and the Rio Hondo on the west, with the latter coursing through the western parcel of the proposed Project area. In the far western portion and in the south-central portion of the proposed Project area, surficial exposures of younger Quaternary Alluvium are found that are derived from the active channels of the San Gabriel River on the east and the Rio Hondo on the west.

The relatively coarse deposits of Quaternary gravels exposed in the proposed Project area are unlikely to contain significant vertebrate fossils, at least in the uppermost layers. Although finer-grained, the younger Quaternary fluvial deposits as exposed in the proposed Project area parcels also typically do not contain significant vertebrate fossils in the uppermost layers. Both of these deposits may contain significant vertebrate fossils in older Quaternary Alluvium at modest depth; however, the closest vertebrate fossil locality in these older Quaternary deposits is LACM 3363, southwest of the proposed Project area just east of the Long Beach Freeway (Interstate 710) between the San Bernardino Freeway (Interstate 10) and the Pomona Freeway (State Highway 60). This locality produced specimens of fossil horse, *Equus*, at unknown depth.

The next closest vertebrate fossil localities in these sediments are LACM 7701-7702, west-southwest of the proposed Project areas between the Golden State Freeway (Interstate 5) and the Los Angeles River just north of the intersection of the Long Beach Freeway (Interstate 710) and Atlantic Avenue. These localities produced fossil specimens of three-spine stickleback, *Gasterosteus aculeatus*; salamander, *Batrachoseps*; common snake, *Colubridae*; rabbit, *Sylvilagus*; deer mouse, *Microtus*; pocket gopher, *Thomomys*; and pocket mouse, *Reithrodontomys*. A little farther west of locality LACM 3363 listed above, near the intersection of Workman Street and Alhambra Road across from the Los Angeles County LAC+USC Medical Center, locality LACM 1023 produced fossil specimens of turkey, *Meleagris californicus*; sabre-toothed cat, *Smilodon californicus*; horse, *Equus*; and deer, *Odocoileus* from these Quaternary deposits.

SECTION 5.0 – FIELD SURVEY

5.1 METHODS

Chambers Group Cultural Resource Specialist Charles Cisneros surveyed the Project area in July 2013. The entire Project area was surveyed by walking an east-west linear transect line. The cultural resource specialist examined the ground surface for the presence of prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools), historic artifacts (e.g., metal, glass, ceramics), sediment discoloration that might indicate the presence of a cultural midden, and depressions and other features indicative of the former presence of structures or buildings (e.g., post holes, foundations). Mr. Cisneros maintained transect accuracy using an ArcGIS global positioning system (GPS) receiver and Project maps. A field notebook and a digital camera were used to record survey conditions. Copies of the field notes and digital photographs are on file at the Chambers Group Santa Ana Office.

5.2 RESULTS

Mr. Cisneros did not identify archaeological sites or isolated cultural resources in the Project area. The Project area is developed land situated on a relatively flat, open space with no geographic obstructions or impediments, allowing the entire Project area to be completely surveyed. During the 2013 intensive-level field survey for cultural resources, ground visibility in the Project area was good, with approximately 75 percent visibility. The remaining 25 percent was obstructed by pavement and vegetation consisting of riparian vegetation (Figure 8) and dry ruderal grasses (Figure 9). The Project area is in a disturbed context and the likelihood of encountering previously unrecorded resources is low.



Figure 10: Overview of sediment removal area and riparian vegetation (view facing south).



Figure 11: Overview of Project area, pavement and dry ruderal grasses (view facing east).

SECTION 6.0 – DISCUSSION AND RECOMMENDATIONS

The goal of this archaeological survey and report is to identify cultural and paleontological resources within the Peck Water Conservation Improvement Project area and provide management recommendations for those resources. The results of the cultural records search indicated that the study area has been surveyed by a qualified cultural resource specialist within the last three years. No previously recorded cultural resources were found in the Project area, although four previously recorded cultural resources (CA-LAN-3117, 19-186876, 19-190506, and 19-190510) are located within the Survey Area for the records search. The NAHC Sacred Lands File search was negative for Native American cultural resources within the 0.8-km (0.5-mile) boundary of the Survey Area. Chambers Group's cultural resource specialist did not identify cultural resources within the Project area. Additionally, the paleontological records search conducted by the Natural History Museum of County of Los Angeles was negative for vertebrate paleontological resources.

Based on the results listed above, the likelihood of encountering previously unrecorded resources is low. Consequently, Chambers Group recommends no further cultural or paleontological resources work. In the event that a cultural or paleontological resource is exposed during ground-disturbing activities, construction activities (e.g., grading, grubbing, or vegetation clearing) should be halted immediately near the discovery. A cultural resource specialist and/or paleontological resource specialist who meet the Secretary of the Interior's Professional Qualifications Standards (National Park Service 1983) should then be retained to evaluate the find's significance under CEQA. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and should be discussed in consultation with the lead agency.

The discovery of human remains is always a possibility during ground disturbances; State of California Health and Safety Code Section 7050.5 addresses these findings. This code section states that no further disturbance shall occur until the County of Los Angeles Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

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APPENDIX A – NATIVE AMERICAN CORRESPONDENCE





Additional Information



California Native Americans

Cultural Resources

Strategic Plan

Commissioners

Federal Laws and Codes

State Laws and Codes

Local Ordinances and Codes

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Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION

915 Capitol Mall, RM 364

Sacramento, CA 95814

(916) 653-4082

(916) 657-5390 – Fax

nahc@pacbell.net

Information Below is Required for a Sacred Lands File Search

Project: Peck Road Spreading Basin Project

County: Los Angeles

USGS Quadrangle

Name: EL Monte and Baldwin Park 7.5-Min Quad

Township 1 Range S Section(s) Unsectioned

Company/Firm/Agency:

Chambers Group

Contact Person: Charles W. Cisneros

Street Address: 315 W. 9th Street, Suite 400

City: Los Angeles, CA Zip: 90015

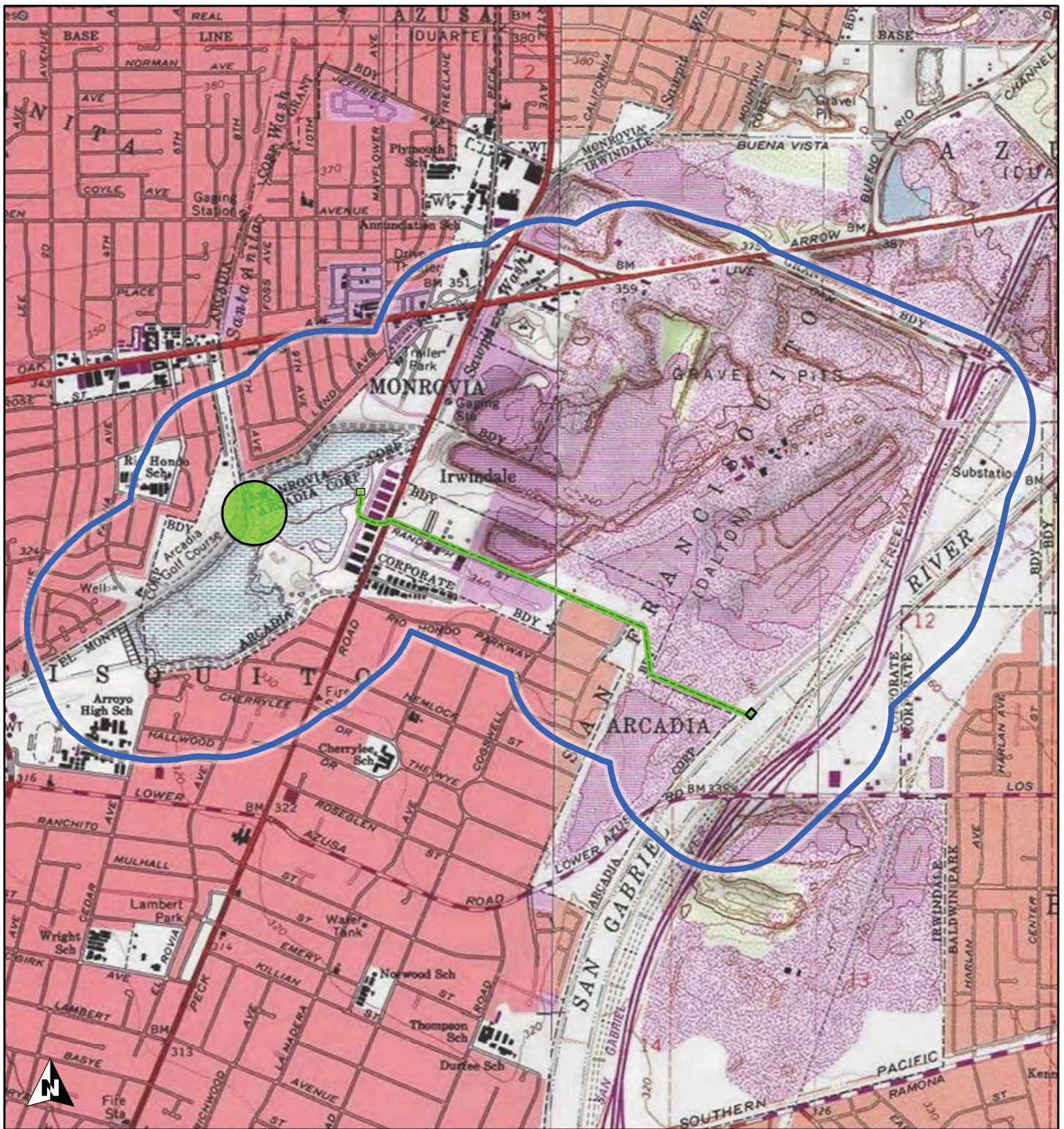
Phone: 714-545-2255 extension 7510

Fax: _____

Email: ccisneros@chambersgroupinc.com


Project Description:


The project is an initial study for the Peck Road Spreading Basin Project in the cities of Arcadia and Irwindale, Los Angeles County. The project involves improvements within and adjacent to Peck Road Spreading Basin to increase operational efficiency and flexibility at the Basin.



 = Study Area  = Project Elements

Peck Road Basin Pump Station and Pipeline Project
Project # 20625
Record Search Map

0 0.25 0.5 0.75 1
 Miles

 Kilometers
0 0.25 0.5 0.75 1

Project located on USGS El Monte and Baldwin Park 7.5-Min. Quadrangles

Sources: © 2011 National Geographic Society, i-cubed

NATIVE AMERICAN HERITAGE COMMISSION

1650 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916) 373-3715
Fax (916) 373-5471
Web Site www.nahc.ca.gov
E-mail Na_hc@pacbell.net



February 12, 2014

Mr. Charles W. Cisneros, RPA

CHAMBERS GROUP

315 W. 9th Street, Suite 400
Los Angeles, CA 90015

Sent by FAX to: 213-623-1779
No. of Pages: 4

RE: Sacred Lands File Search and Native American Contacts list for the "**Sediment Removal Mitigation Project for the Peck Road Spreading Basin and Santa Anita Wash;**" located in the El Monte and Baldwin Park area of Los Angeles County, California.

Dear Mr. Cisneros:

A record search of the NAHC Sacred Lands File **failed to indicate** the presence of Native American traditional cultural places in the project site(s), that were submitted and defined by the USGS coordinates configuring the 'Area(s) of Potential Effect' or APE(s). Note also that the absence of archaeological and/or Native American cultural resources does not preclude their existence at the subsurface level.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the Court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

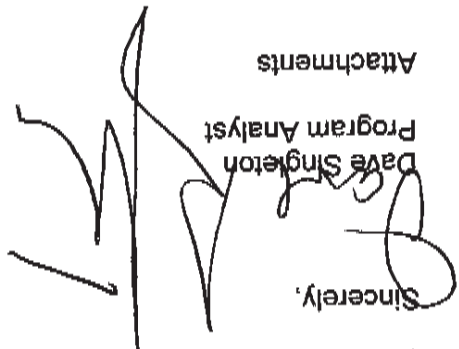
Attached is a list of Native American tribes, Native American individuals or organizations that may have knowledge of cultural resources in or near the project area (APE). As part of the consultation process the NAHC recommends that local government and project developers contact the tribal governments and individuals in order to determine the proposed action on any cultural places/sacred sites. If a response from those listed is not received in two weeks of notification, the NAHC requests that a follow-up telephone call be made to ensure the project information has been received.

California Government Code Section 65040.12(e) defines "environmental justice" to provide "fair treatment of People...with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies" and Executive Order B-10-11 requires consultation with Native American tribes their elected officials and other representatives of tribal governments to provide meaningful input into

the development of legislation, regulations, rules, and policies on matters that may affect tribal communities.

If you have any questions or need additional information, please contact me at (916) 373-3715.

Sincerely,



Dave Singleton
Program Analyst

Attachments

**Native American Contacts
Los Angeles County California
February 12, 2014**

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th St, Rm. 403
Los Angeles , CA 90020
randrade@css.lacounty.gov
(213) 351-5324
(213) 386-3995 FAX

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490
Bellflower , CA 90707
gtongva@verizon.net
562-761-6417 - voice
562-761-6417- fax

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Private Address
tattmlaw@gmail.com
310-570-6567

Gabrielino Tongva
P.O. Box 180
Bernie Acuna, Co-Chairperson
Gabrielino-Tongva Tribe
Gabrielino Tongva
Bonsall , CA 92003
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(310) 428-5690 - cell
(760) 636-0854- FAX
dacuna1@gabrielinotribe.org

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1232 - FAX
(626) 286-1758 - Home
(626) 286-1262 -FAX

Gabrielino Tongva
P.O. Box 86908
Sandonne Goad, Chairperson
Gabrielino /Tongva Nation
sgoad@gabrielino-tongva.com
951-845-0443

Gabrieleno Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393
Covina , CA 91723
gabrielenoindians@yahoo.
(626) 926-4131

This list is current only as of the date of this document.
Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,
Section 5097.94 of the Public Resources Code and Section 6087.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed
Sediment Mitigation Project located in the El Monte, Baldwin Hills areas of Los Angeles County, California for which a Sacred
Lands File search and Native American Contacts list were requested.

**Native American Contacts
Los Angeles County California
February 12, 2014**

**Gabrielino-Tongva Tribe
Conrad Acuna,
P.O. Box 180
Bonsall , CA 92003**

Gabrielino

760-636-0854 - FAX

**Gabrielino /Tongva Nation
Sam Dunlap, Cultural Resources Director
P.O. Box 86908
Los Angeles , CA 90086
samdunlap@earthlink.net
909-262-9351**

This list is current only as of the date of this document.

**Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,
Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.**

**This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed
Sediment Mitigation Project; located in the El Monte, Baldwin Hills areas of Los Angeles County, California for which a Sacred
Lands File search and Native American Contacts list were requested.**

Andrew Salas
Chairman
Nadine Salas
Vice-Chairman
Dr. Christina Swindall Martinez
Secretary
Albert Perez
Treasurer I
Martha Gonzalez-Lemos
Treasurer II
Richard Gradias
Chairman of the Council of Elders
Ernest P Salas Teutimes
Chief, Spiritual leader



GABRIELEÑO BAND OF MISSION INDIANS
Historically known as The San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

Charles W. Cisneros, Cultural Resources Specialist II
Chambers Group, Inc
5 Hutton Centre Drive, Suite 750
Santa Ana, CA 92707

re: Project #20625, Peck Road Water Conservation Improvement Project

March 19, 2014

Dear Mr. Cisneros,

This letter is in response to your letter dated February 14, 2014 in regards to the above project. The proposed project encompasses a large area and I have concern that this area is highly culturally sensitive area. Our once vibrant villages of Alupangna, Azusangna and Houtnga were located in this region. In order to protect our resources we're requesting one of our experienced & certified Native American monitors to be on site during all ground disturbances.

In all cases, when the Native American Heritage Commission states there are "no records of sacred sites" in the subject area, they always refer the contractors back to the Native American Tribes whose tribal territory the project area is in. This is due to the fact that the NAHC is only aware of general information on each California Native American Tribe. They are NOT the experts on our Tribe. Our Elder Committee & Tribal Historians are the experts. Please contact our office regarding this project to coordinate a Native American monitor to be present. Thank you.

Sincerely,

Andy Salas, Chairman
cell: (626)926-4131
email: gabrielenoindians@yahoo.com

**APPENDIX B – NATURAL HISTORY MUSEUM OF COUNTY OF LOS ANGELES
VERTEBRATE PALEONTOLOGICAL RECORDS SEARCH**

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007
tel 213.763.DINO
www.nhm.org



Vertebrate Paleontology Section
Telephone: (213) 763-3325
Fax: (213) 746-7431
e-mail: smcleod@nhm.org

14 August 2013

The Chambers Group, Inc.
315 W. 9th Street
Los Angeles, CA 90015

Attn: Charles Cisneros, Staff Cultural Resources Specialist

re: Paleontological Resources for the proposed Peck Road Spreading Basin Project, Chambers Group, Inc. Project No. 20625, near Baldwin Park, Los Angeles County, project area

Dear Charles:

I have conducted a thorough search of our Vertebrate Paleontology records for the proposed Peck Road Spreading Basin Project, Chambers Group, Inc. Project No. 20625, near Baldwin Park, Los Angeles County, project area as outlined on the portions of the El Monte and Baldwin Park USGS topographic quadrangle maps that you sent to me via e-mail on 9 August 2013. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities nearby from sedimentary deposits the same as or similar to those that occur in the proposed project areas.

Most of the proposed project area has surface deposits composed predominantly of younger Quaternary gravels with some finer-grained sands, derived from the active channels of the San Gabriel River on the east and the Rio Hondo on the west, with the latter coursing through the western parcel of the proposed project. In the far western portion and in the south-central portion of the proposed project area there are surficial exposures of younger Quaternary Alluvium, again derived from the active channels of the San Gabriel River on the east and the Rio Hondo on the west.

The relatively coarse deposits of Quaternary gravels exposed in the proposed project area are unlikely to contain significant vertebrate fossils, at least in the uppermost layers, and we have

no vertebrate fossil localities nearby from such deposits. Although finer-grained, the younger Quaternary fluvial deposits as exposed in the proposed project area parcels also typically do not contain significant vertebrate fossils in the uppermost layers. Both of these deposits may contain significant vertebrate fossils in older Quaternary Alluvium at modest depth, however. Our closest vertebrate fossil locality in these older Quaternary deposits is LACM 3363, west-southwest of the proposed project area just east of the Long Beach Freeway (I-710) between the San Bernardino Freeway (I-10) and the Pomona Freeway (Highway 60), that produced specimens of fossil horse, *Equus*, at unknown depth. Our next closest vertebrate fossil localities in these sediments are LACM 7701-7702, west-southwest of the proposed project areas between the Golden State Freeway (I-5) and the Los Angeles River just north of the intersection of the Long Beach Freeway (I-710) and Atlantic Avenue. These localities produced fossil specimens of three-spine stickleback, *Gasterosteus aculeatus*, salamander, *Batrachoseps*, common snake, Colubridae, rabbit, *Sylvilagus*, deer mouse, *Microtus*, pocket gopher, *Thomomys*, and pocket mouse, *Reithrodontomys*. A little farther west of locality LACM 3363 listed above, near the intersection of Workman Street and Alhambra Road across from the Los Angeles County / USC hospital, our locality LACM 1023 from these Quaternary deposits produced fossil specimens of turkey, *Meleagris californicus*, sabretoothed cat, *Smilodon californicus*, horse, *Equus*, and deer, *Odocoileus*. The turkey from locality LACM 1023 was published in the scientific literature by Steadman in 1980 (A Review of the Osteology and Paleontology of Turkeys (Aves: Meleagridinae). Contributions in Science, Natural History Museum of Los Angeles County, 330:131-207).

Surface grading or shallow excavations in the Quaternary gravels or younger Quaternary Alluvium exposed in the proposed project area are unlikely to encounter significant vertebrate fossils. Deeper excavations that extend down into older Quaternary deposits, however, may well uncover significant fossil vertebrate remains. Any substantial excavations in the proposed project area, therefore, should be closely monitored to quickly and professionally recover any potential vertebrate fossils without impeding development. Because many of the fossils recovered from the closest similar vertebrate fossil localities are very small and would be missed during typical paleontological monitoring of excavations, it is recommended that sediment samples be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

A handwritten signature in black ink, reading "Samuel A. McLeod". The signature is fluid and cursive, with the first name "Samuel" being the most prominent.

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

APPENDIX F – NOISE ANALYSIS



NOISE IMPACT ANALYSIS

PECK WATER CONSERVATION IMPROVEMENT PROJECT

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

LEAD AGENCY:

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

PREPARED BY:

VISTA ENVIRONMENTAL
1021 DIDRIKSON WAY
LAGUNA BEACH, CALIFORNIA 92651
GREG TONKOVICH, INCE
TELEPHONE (949) 510-5355
FACSIMILE (949) 715-3629

PROJECT No. 13032

DECEMBER 18, 2013

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibels
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
EPA	Environmental Protection Agency
Hz	Hertz
L _{dn}	Day-night average noise level
L _{eq}	Equivalent sound level
L _{max}	Maximum noise level
ONAC	Federal Office of Noise Abatement and Control
OSHA	Occupational Safety and Health Administration
RCNM	Roadway Construction Noise Model
SEL	Single Event Level or Sound Exposure Level
STC	Sound Transmission Class
UMTA	Federal Urban Mass Transit Administration

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Noise Impact Analysis has been prepared to determine the offsite and onsite noise impacts associated with the proposed Peck Water Conservation Improvement project (proposed project). The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- Information regarding the fundamentals of vibration;
- A description of the local noise guidelines and standards;
- An evaluation of the current noise environment;
- An analysis of the potential short-term construction-related noise impacts from the proposed project; and,
- An analysis of long-term operations-related noise impacts from the proposed project.

1.2 Site Location and Study Area

The spreading basin is located in the Los Angeles River Watershed in the southeastern portion of the City of Arcadia. This portion of the City of Arcadia in which the spreading basin is located is a narrow strip of land surrounded by the City of Irwindale to the north and El Monte to the south.

The project site consists of a former gravel mining pit that spans over three quarter mile in length by a quarter mile in width. The spreading basin consists of two deep pits that combine to form one basin with a total storage capacity of 3,600 acre-feet. However, due to sediment accumulation, the current capacity is approximately 3,230 acre-feet. Under the jurisdiction of the Los Angeles County Flood Control District (LACFCD), the facility is one of the largest water conservation facilities that recharges the Main San Gabriel Ground Water Basin. The nearest sensitive receptors consist of single-family residential units located on the north side of the basin and as near as 50 feet (15 meters) from the proposed project's activities. The Project Location Map and preferred haul route is shown in Figure 1.

1.3 Proposed Project Description

Over the years, storm flows have brought sediment into the basins, accumulating south of the Santa Anita Wash outlet and west of the Sawpit Wash outlet. The sediment accumulation at the mouth of Santa Anita Wash restricts water flows and causes a separation between the northern and southern portions of the spreading basin, decreasing the overall storage capacity. In addition the facility's percolation is currently limited due to the accumulated sediment. High uncontrolled flows from Santa Anita and Sawpit Washes can cause the basin the fill up quickly and allow the water to be wasted through the Rio Hondo Channel to the ocean.

The proposed project will include the removal of accumulated sediment from the spreading basin, construction of a pump station located at the northeastern shore of the spreading basin, and construction of a pipeline that connects the outlet structure into the San Gabriel River. The proposed site plan is shown in Figure 2.

Sediment Removal

The proposed project will involve the excavation and removal of approximately 94,000 cubic yards of sediment to restore basin capacity, improve water flows and allow for the transport of water to the soft-bottom San Gabriel River. The spreading basin near the outlet of the Santa Anita Wash will be excavated to an elevation of 290 feet to achieve a capacity of 3,290 acre-feet. Prior to the removal of the sediment, the spreading basin will be drained to approximately 208 feet and the vegetation in the excavation area will be removed.

Construction staging for sediment excavation will be located on the western bank of the spreading basin immediately north of the Santa Anita Wash outlet. This area is located immediately adjacent to the excavation area within the spreading basin. Access to the construction staging area will be provided by a gated access road that connects to Peck Road. The gated access road begins adjacent to the northeastern corner of the spreading basin and travels along the northern and western shore of the basin before terminating at the staging area. When necessary, temporary access roads will be created from the existing access road into the basin.

It is estimated that removal of excavated sediment from the project site will be accomplished by transporting approximately 200 truck loads per day over 60 working days. Excavated sediment will be hauled away from the project site to one of the following sediment disposal sites; Peck Road Gravel Pit, Manning Pit Sediment Placement Site, or Azusa Land Reclamation. These sites are located in the cities of Irwindale and Azusa, approximately 2 to 7 miles east of the spreading basin. The potential haul routes to the sediment disposal sites are delineated in Figure 1.

Maintenance for the proposed project will require periodic sediment removal from the Santa Anita Wash outlet. Up to 2,000 cubic yards of sediment may need to be removed per year. It is anticipated that the hauling of sediment during maintenance will follow the same truck haul route.

Pump Station

The proposed project will involve the construction of a pump station on the eastern shore of the Peck Road Spreading Basin to transfer water to the San Gabriel River. The pump station will house two 225 horsepower electric motor pumps, electrical equipment, and connection to the intake structure. The pump station will be connected to an existing electrical service and an enclosed power transformer will be constructed adjacent to the pump station.

Pipeline

Pumped water from the basin will be conveyed to the San Gabriel River by an approximately 7,000-foot long pipeline connecting the two water bodies. The ductile iron pipeline will be placed 6 feet underground and have a diameter of 42 inches. The westernmost segment of the pipeline alignment will traverse the parking area of an industrial building and cross Peck Road. The pipeline alignment will then traverse Clark Street, 6 feet south of the roadway centerline. The remainder of the pipeline alignment will traverse undeveloped land south of the gravel mining pit located east of the spreading basin within the City of Irwindale. The eastern terminus of the pipeline to the San Gabriel River will include an outlet structure.

Project Schedule

The proposed project is expected to occur over a 12 month period, between approximately winter of 2014 and winter of 2015. Excavation activities are anticipated to be completed in 60 working days. Construction activities will take place between the hours of 7:00 a.m. to 7:00 p.m. on Monday through Friday.

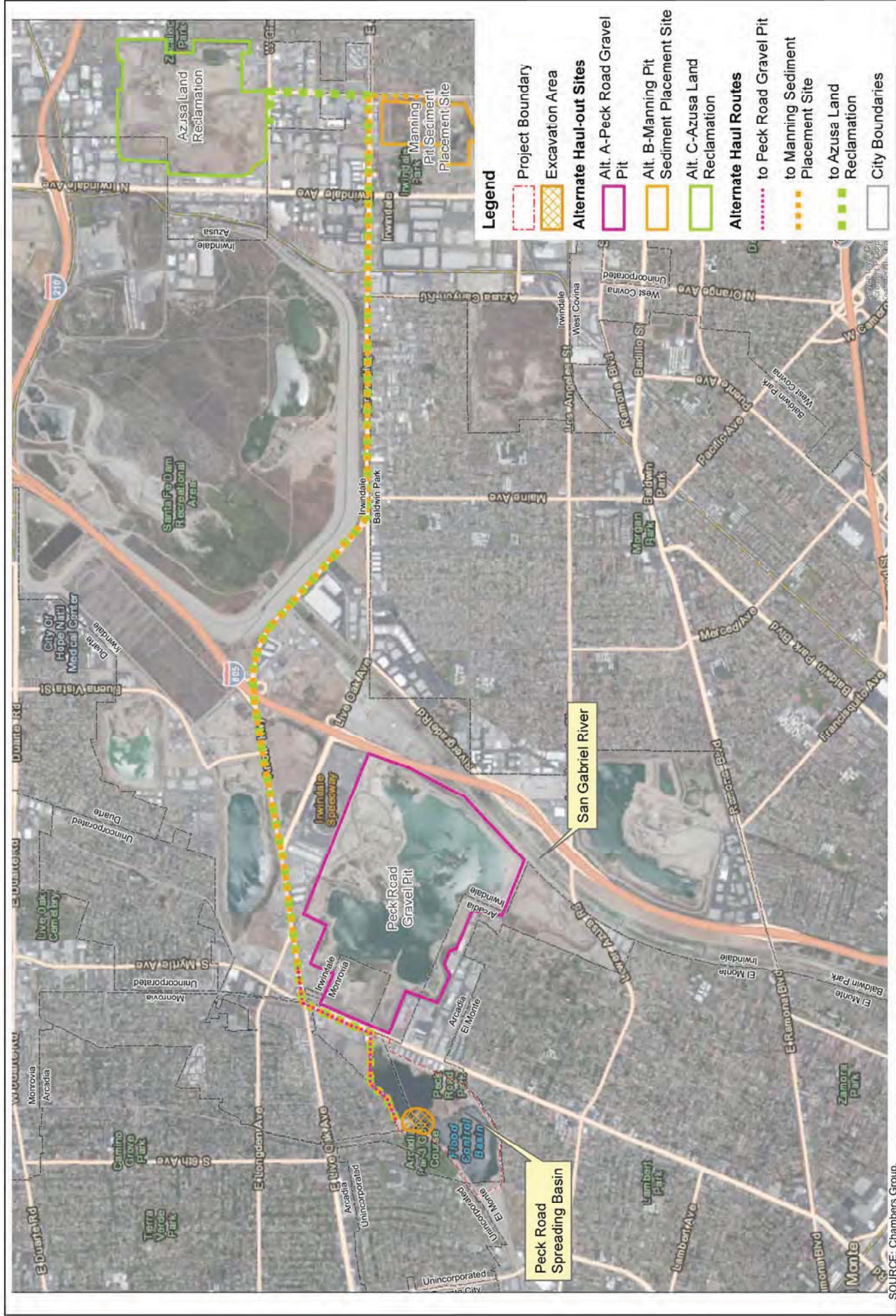


Figure 1
Project Location Map and Potential Haul Routes



2.0 NOISE FUNDAMENTALS

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. The vibration of sound pressure waves in the air produces sound. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit that expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear.

2.1 Noise Descriptors

Noise Equivalent sound levels are not measured directly, but are calculated from sound pressure levels typically measured in dBA. The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The peak traffic hour Leq is the noise metric used by the California Department of Transportation (Caltrans) for all traffic noise impact analyses.

The Day-Night Average Level (Ldn) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of ten decibels to sound levels at night between 10:00 p.m. and 7:00 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the Ldn, except that it has another addition of 4.77 dB to sound levels during the evening hours between 7:00 p.m. and 10:00 p.m. These additions are made to the sound levels at these time periods because during the evening and nighttime hours, when compared to daytime hours, there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds. For this reason the sound appears louder in the evening and nighttime hours and is weighted accordingly. The City of Arcadia relies on the CNEL noise standard to assess transportation-related impacts on noise sensitive land uses.

Another noise descriptor that is used primarily for the assessment of aircraft noise impacts is the Sound Exposure Level, which is also called the Single Event Level (SEL). The SEL descriptor represents the acoustic energy of a single event (i.e., an aircraft overflight) normalized to one-second event duration. This is useful for comparing the acoustical energy of different events involving different durations of the noise sources. The SEL is based on an integration of the noise during the period when the noise first rises within 10 dBA of its maximum value and last falls below 10 dBA of its maximum value. The SEL is often greater than 10 dBA or more than the L_{MAX} since the SEL logarithmically adds the Leq for each second of the duration of the noise.

2.2 Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown that humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a “pure tone,” there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to “stand out” against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by:

- 5 dB for center frequencies of 500 hertz (Hz) and above
- 8 dB for center frequencies between 160 and 400 Hz
- 15 dB for center frequencies of 125 Hz or less

2.3 Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound from point sources, such as air conditioning condensers, radiate uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

2.4 Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources a 4.5 dBA/DD drop-off rate is typically observed for soft-site conditions compared to the 3.0 dBA/DD drop-off rate for hard-site conditions. Caltrans research has shown that the use of soft-site conditions is more appropriate for the application of the Federal Highway Administration (FHWA) traffic noise prediction model used in this analysis.

3.0 GROUND-BORNE VIBRATION FUNDAMENTALS

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors; since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

3.1 Vibration Descriptors

There are several different methods that are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Due to the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels and is denoted as (L_v) and is based on the rms velocity amplitude. A commonly used abbreviation is “VdB”, which is when L_v is based on the reference quantity of 1 micro inch per second.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration.

3.3 Vibration Propagation

The propagation of ground-borne vibration is not as simple to model as airborne noise. This is due to the fact that noise in the air travels through a relatively uniform median, while ground-borne vibrations travel through the earth that may contain significant geological differences. There are three main types of vibration propagation; surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground’s surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a “push-pull” fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or “side-to-side and perpendicular to the direction of propagation.” As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 REGULATORY SETTING

Noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

Noise Control Act of 1972

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce;
- Assisting state and local abatement efforts; and
- Promoting noise education and research.

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA). The federal Urban Mass Transit Administration (UMTA) regulates transit noise, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

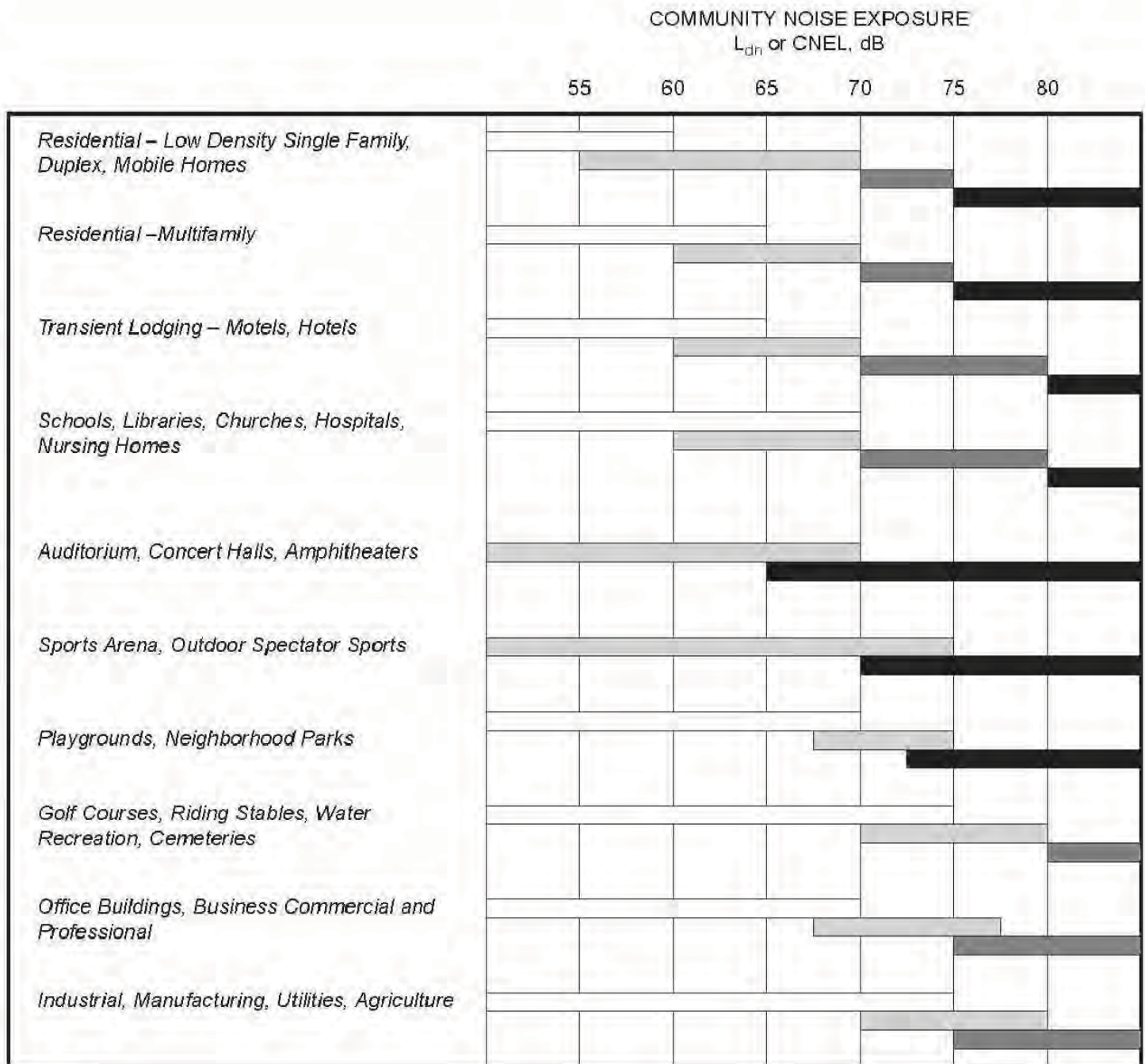
Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

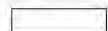
Noise Standards

California Department of Health Services Office of Noise Control

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regulatory tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise and which is shown below in Figure 3.

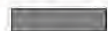


LEGEND:



NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.



NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.



CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

Source: California Department of Health *Guidelines for the Preparation and Content of Noise Elements of the General Plan*, November, 1990

California Noise Insulation Standards

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the California Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

Vibration Standards

Title 14 of the California Administrative Code Section 15000 requires that all state and local agencies implement the California Environmental Quality Act (CEQA) Guidelines, which requires the analysis of exposure of persons to excessive groundborne vibration. However, no statute has been adopted by the state that quantifies the level at which excessive groundborne vibration occurs.

Caltrans issued the *Transportation- and Construction-Induced Vibration Guidance Manual* in 2004. The manual provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. However, this manual is also used as a reference point by many lead agencies and CEQA practitioners throughout California, as it provides numeric thresholds for vibration impacts. Thresholds are established for continuous (construction-related) and transient (transportation-related) sources of vibration, which found that the human response becomes distinctly perceptible at 0.25 inch per second PPV for transient sources and 0.04 inch per second PPV for continuous sources.

4.3 Local Regulations

The City of Arcadia General Plan and Municipal Code establishes the following applicable policies related to noise and vibration.

City of Arcadia General Plan

Goal N-1: Effective incorporation of noise considerations into land use planning decisions.

- Policy N-1-1 Consider noise impacts as part of the development review process relative to residential and other noise-sensitive land uses.
- Policy N-1-2 Ensure that acceptable noise levels are maintained near schools, hospitals, and other sensitive areas in accordance with the Noise/Land Use Compatibility Guidelines in Figure N-4, Table N-2 [Table B] Interior/Exterior Noise Standards, and the City's Noise Ordinance.

Table A – City of Arcadia Interior/Exterior Noise Level Standards

Land Use	Maximum Exterior Noise Level	Maximum Interior Noise Level
Residential; Rural, Single-Family, and Multi-Family	65 dBA CNEL	45 dBA CNEL
Schools		
Classroom	70 dBA CNEL	45 dBA Leq
Playground	70 dBA CNEL	--
Libraries	--	45 dBA
Hospitals/Convalescent Facilities		
Sleeping Areas	65 dBA CNEL	45 dBA CNEL
Living Areas	--	50 dBA CNEL
Reception, Office	--	50 dBA Leq
Hotels/Motels		
Sleeping Areas	--	45 dBA CNEL
Reception, Office	--	50 dBA Leq
Places of Worship	65 dBA CNEL	45 dBA Leq
Open Space/Recreation		
Wildlife Habitat	60 dBA CNEL	--
Passive Recreation Areas	65 dBA CNEL	--
Active Recreation Areas	70 dBA CNEL	--
Commercial and Business Park		
Office	--	55 dBA Leq
Restaurant, Retail, Service	--	65 dBA Leq
Warehousing/Industrial	--	70 dBA Leq

Source: City of Arcadia, 2010.

Policy N-1-5 Require that proposed projects that have the potential to result in noise impacts include an acoustical analysis and appropriate mitigation to achieve the interior and exterior noise standards indicated in Table N-2 [Table B] Interior/Exterior Noise Standards.

Goal N-2 Reduced noise impacts from transportation sources

Policy N-2-5 Enforce truck routes established in the Circulation and Infrastructure Element and the Municipal Code.

Goal N-3 Limited intrusion of point-source noise within residential neighborhoods and on noise-sensitive uses

Policy N-3-3 Explore requiring the use of noise suppression devices and techniques on all exterior noise sources (construction operations, pumps, fans, leaf blowers) to lower exterior noise levels that are compatible with adjacent land uses.

Policy N-3-5 Require noise created by new non-transportation noise sources to be mitigated so as not to exceed acceptable interior and exterior noise level standards identified in this Noise Element.

City of Arcadia Municipal Code

The City of Arcadia Municipal Code establishes the following applicable standards related to noise.

Section 4610.3. Noise Limits

- (a) It shall be unlawful for any person within the City of Arcadia to produce or cause or allow to be produced sound or noise which is amplified by the use of sound amplifying equipment and which amplified noise or sound is received on property occupied by another person within the designated region, in excess of the following levels, except as expressly provided otherwise or exempted hereinafter:

Table B – City of Arcadia Noise Limits

Region	Day (7:00 a.m. to 10:00 p.m.)	Night (10:00 p.m. to 7:00 a.m.)
Residential Zone	55 dBA	50 dBA
Commercial Zone	65 dBA	60 dBA
Industrial Zone	70 dBA	70 dBA

Source: City of Arcadia, 2013.

At the boundary line between two of the above zones the noise level of the quieter zone shall be used.

- (c) It shall be unlawful for any person to produce or cause or allow to be produced sound or noise from air-conditioning equipment, pumps, fans or similar machinery which is received on residentially zoned property occupied by another person in excess of 55 dBA, provided, however, that if such machinery was installed prior to December 1, 1970, the noise level shall not be in excess of 60 dBA.

Section 4261. Prohibited Hours Defined.

The term “prohibited hours” as used in this Part shall mean any time after the hour of 7:00 p.m. or any day; any time before the hour of 7:00 a.m. of any day; any time on any Sunday; and any time on any of the following holidays: January 1 (New Year’s Day); May 30 (Memorial Day); July 4; Labor Day; November 11 (Veteran’s Day); Thanksgiving Day; and December 25 (Christmas Day); provided that if in any calendar year any such holiday falls on a Sunday, the following Monday shall constitute the holiday.

Section 4262. Construction Limited.

Unless a permit so to do shall first have been obtained as provided in Section 4263, no person shall during prohibited hours engage in any earth excavation, land fill or earth moving operation or in the construction of any portion of a building or structure, nor shall any person during prohibited hours use or operate any truck, tractor, crane, rig, or any mechanical equipment of any kind in connection with, in the performance of or in furtherance of any of the foregoing.

5.0 EXISTING NOISE CONDITIONS

To determine the existing noise level environment, noise measurements have been taken in the vicinity of the project site. The field survey noted that noise within the proposed project area is generally characterized by vehicular traffic on the nearby roadways. The following describes the measurement procedures, measurement locations, noise measurement results, and the modeling of the existing noise environment.

5.1 Noise Measurement Equipment

The noise measurements were taken using a Larson-Davis Model 831 Type 1 precision sound level meter programmed in “slow” mode to record noise levels in “A” weighted form as well as the frequency spectrum of the noise broken down into 1/3 octaves. The sound level meter and microphone were mounted on a tripod five feet above the ground and were equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200. The accuracy of the calibrator is maintained through a program established through the manufacturer and is traceable to the National Bureau of Standards. The unit meets the requirements of ANSI Standard S1.4-1984 and IEC Standard 942: 1988 for Class 1 equipment. All noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

All traffic noise measurement durations were measured according to the standards stated in Section N-3320 of Caltrans Technical Noise Supplement (TeNS), which specifies that the measurements be a duration of at least 10 minutes and shall be continued past 10 minutes until the fluctuations in the displayed Leq is less than 0.5 dBA.

Noise Measurement Locations

The noise monitoring locations were selected in order to obtain noise measurements of the current noise levels in the project study area and to provide a baseline for any potential noise impacts that may be created by development of the proposed project. The noise measurement sites were selected to provide a representative sampling of the noise levels created by nearby noise sources as well as experienced by nearby sensitive receptors. Descriptions of the noise monitoring sites are provided below in Table C and Figure 4 shows the noise monitoring site locations. Appendix A includes a photo index of the study area and noise level measurement locations.

Noise Measurement Timing and Climate

The noise measurements were recorded between 3:18 p.m. and 4:59 p.m. on Thursday, August 22, 2013. When the noise measurements were started the sky was clear, the temperature was 96 degrees Fahrenheit, the humidity was 22 percent, barometric pressure was 29.42 inches of mercury, and the wind was blowing around 8 miles per hour.

5.2 Noise Measurement Results

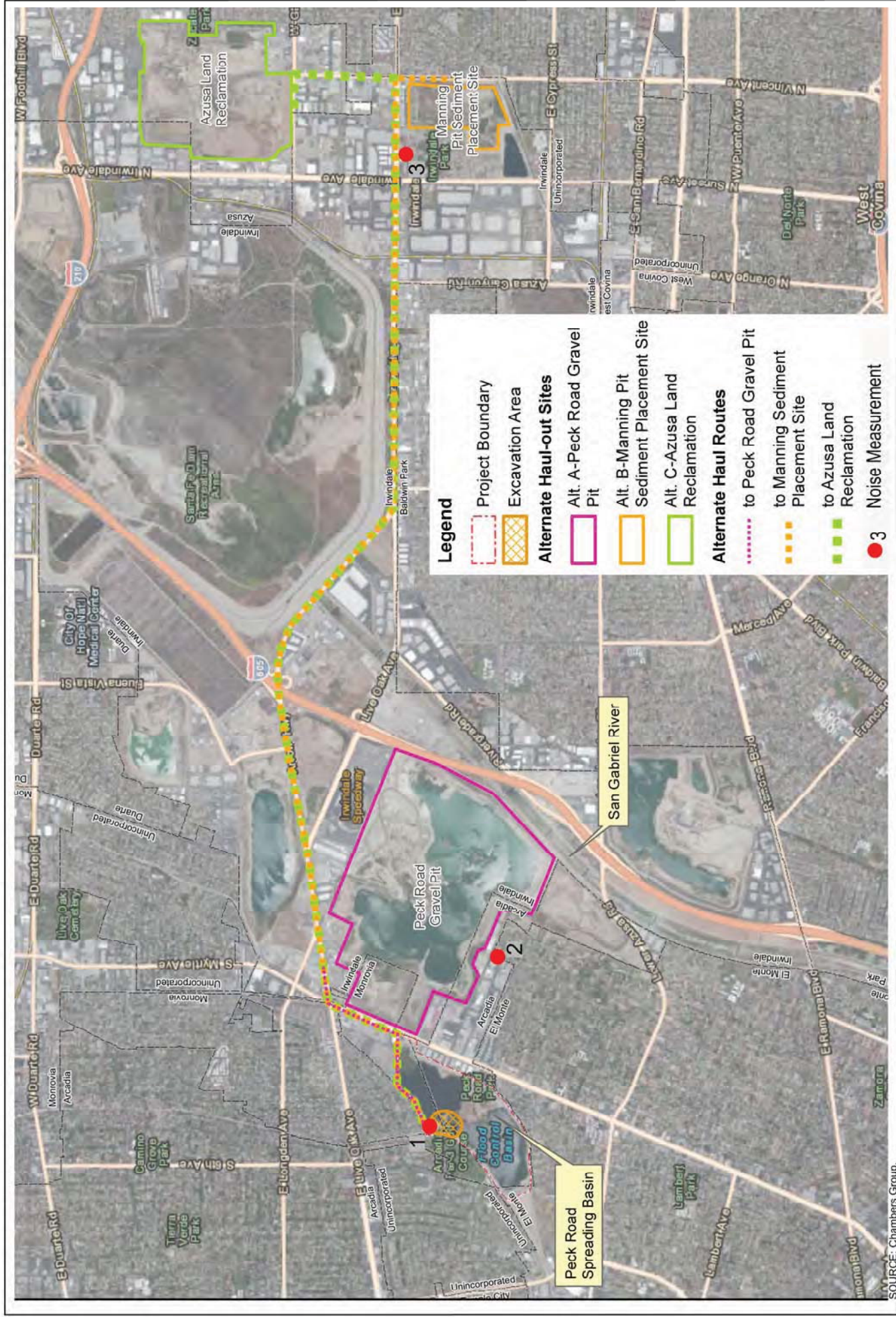
The results of the noise level measurements are presented in Table C. The existing noise level measurements ranged from 45.3 to 72.9 dBA Leq, with the highest noise measurement at Site 3. The noise measurement data printouts are provided in Appendix B.

Table C – Existing (Ambient) Noise Level Measurements

Site No.	Site Description	Primary Noise Source	Start Time	Duration (min:sec)	Noise Levels	
					dBA Leq	dBA L _{max}
1	Located at the proposed staging area next to the Santa Anita Wash and approximately 260 feet south of the nearest home.	Aircraft noise	3:18 p.m.	15:00	45.3	59.3
2	Located on the front yard of the residence at 12012 Clark Street approximately 35 feet south of Clark Street centerline and 150 feet east of Cogswell Road centerline.	Traffic noise on Clark Street	3:49 p.m.	15:00	55.8	71.7
3	Located east of the entry way of the Irwindale Senior Center at 16116 Arrow Highway and approximately 60 feet south of Arrow Highway centerline.	Traffic noise on Arrow Highway	4:44 p.m.	15:30	72.9	87.2

Source: Noise measurements taken with a Larson Davis Model 831 Type 1 precision sound level meter on Thursday August 22, 2013.

According to Section 2.2.3 of the Caltrans Technical Noise Supplement, the CNEL values are generally within plus or minus 2 dBA of the measured peak hour Leq dBA. Table C shows that only Site 3 currently exceeds the normally acceptable residential exterior noise standard of 65 dBA CNEL.



6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 Construction Noise

The noise impacts from construction of the proposed project have been analyzed through use of the FHWA's Roadway Construction Noise Model (RCNM). The FHWA compiled noise measurement data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table D below provides a list of the construction equipment anticipated to be used for each phase of construction as detailed in *Air Quality and Global Peck Water Spreading Basin Project*, prepared by Vista Environmental, September 2, 2013.

Table D – Construction Equipment Noise Emissions and Usage Factors

Equipment Description	Number of Equipment	Acoustical Use Factor ¹ (percent)	Spec 721.560 Lmax at 50 feet ² (dBA, slow ³)	Actual Measured Lmax at 50 feet ⁴ (dBA, slow ³)
Pipeline Construction				
Concrete Saw	1	20	90	90
Excavator	1	40	85	81
Rubber Tired Loader	1	40	80	79
Paving				
Cement/Mortar Mixer	1	40	85	79
Paver	1	50	85	77
Roller	1	20	85	80
Tractor, Loader or Backhoe ⁵	1	40	84	N/A
Dewatering of Basin				
Diesel Pump	4	50	77	81
Removal of Vegetation				
Excavator	1	40	85	81
Dozer	1	40	85	82
Tractor, Loader or Backhoe ⁵	2	40	84	N/A
Sediment Removal				
Excavator	1	40	85	81
Dozer	1	40	85	82
Tractor, Loader or Backhoe ⁵	1	40	84	N/A
Pump Station Construction				
Crane	1	16	85	81
Forklift (Gradall)	1	40	85	83
Generator	1	50	82	81
Welder	3	40	73	74
Tractor, Loader or Backhoe ⁵	1	40	84	N/A

Notes:

¹ Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.

² Spec 721.560 is the equipment noise level utilized by the RCNM program.

³ The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.

⁴ Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.

⁵ For the tractor/loader/backhoe, the tractor noise level was utilized, since it is the loudest of the three types of equipment.

Source: Federal Highway Administration, 2006 and Vista Environmental, 2013.

Table E also shows the associated measured noise emissions for each piece of equipment from the RCNM model and measured percentage of typical equipment use per day. Construction noise impacts to the

nearby sensitive receptors have been calculated according to the equipment noise levels and usage factors listed in Table D and through use of the RCNM. Since it is unlikely that at any time these pieces of construction equipment would operate closer together than that for any significant duration of time, the equipment was placed at the nearest location to the nearby sensitive receptors and each subsequent piece of equipment was placed an additional 50 feet away.

6.2 Operations-Related Noise

The proposed project would require the export of material from the project site through the use of trucks as well as vehicle trips from workers to the project site. In order to quantify the potential noise impacts created and received by the proposed project and compare them to the existing noise levels, the existing roadway noise environment was modeled using the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108 (FHWA Model). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the reference energy mean emission level to account for the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT) and the percentage of ADT which flows during the day, evening and night, the travel speed, the vehicle mix on the roadway, which is a percentage of the volume of automobiles, medium trucks and heavy trucks, the roadway grade, the angle of view of the observer exposed to the roadway and site conditions ("hard" or "soft" relates to the absorption of the ground, pavement or landscaping). The following section provides a discussion of the software and modeling input parameters used in this analysis and a discussion of the resultant existing noise model.

FHWA Model Traffic Noise Prediction Model Inputs

The roadway parameters used for this study are presented in Table E. Only the roadway segments that the proposed project may generate additional vehicular trips and had sensitive land uses were analyzed. The roadway classifications and without project daily traffic volumes are based on the City of Irwindale's General Plan Circulation Element. The with project daily traffic volumes were calculated by adding 200 trips to the without project traffic volumes. The roadway speeds are based on the posted speed limits. The distance to the nearest sensitive receptor was determined by measuring the distance from the roadway centerline to the nearest proposed residential unit. Soft site conditions were used to develop noise contours and analyze noise impacts to the project site. Soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees.

Table E – FHWA Model Roadway Parameters

Roadway	Segment	General Plan Classification	Vehicle Speed (MPH)	Distance to Nearest Home (feet)	Daily Traffic Volumes	
					Baseline	With Project
Peck Road	South of Live Oak Avenue	Arterial	40	130	21,158	21,358
Live Oak Avenue	East of Peck Road	Arterial	45	130	20,765	20,965
Arrow Highway	East of Live Oak Avenue	Arterial	45	240	31,287	31,487
Arrow Highway	East of Azusa Canyon Road	Arterial	45	90	33,250	33,450
Arrow Highway	East of Irwindale Avenue	Arterial	45	60	28,301	28,501
Vincent Avenue	South of Arrow Highway	Secondary	45	50	9,757	9,957

Source: City of Irwindale, 2008.

The vehicle mix used in the FHWA-RD-77-108 Model is shown in Table F. The vehicle mix is based on a typical vehicle mix observed in Southern California. The existing with project vehicle mixes were adjusted to account for the addition of 200 heavy trucks during the daytime and the calculated vehicle mixes used for each site is shown below in Table F.

Table F – Roadway Vehicle Mix

Vehicle Type	Traffic Flow Distributions			Overall
	Day (7 a.m. to 7 p.m.)	Evening (7 p.m. to 10 p.m.)	Night (10 p.m. to 7 a.m.)	
Existing Without Project Vehicle Mix				
Automobiles	69.50%	12.90%	9.60%	92.00%
Medium Trucks	1.44%	0.06%	1.50%	3.00%
Heavy Trucks	2.40%	0.10%	2.50%	5.00%
Existing With Project Arterial Vehicle Mix ¹				
Automobiles	68.91%	12.78%	9.51%	91.20%
Medium Trucks	1.43%	0.06%	1.49%	2.97%
Heavy Trucks	3.28%	0.10%	2.48%	5.86%
Existing With Project Secondary Vehicle Mix				
Automobiles	67.67%	12.51%	9.31%	89.50%
Medium Trucks	1.40%	0.06%	1.46%	2.91%
Heavy Trucks	5.16%	0.10%	2.43%	7.68%

Notes:

¹ The With Project Arterial Vehicle Mix includes the addition of 200 heavy trucks during the daytime. All of vehicle mix percentages for this scenario were revised to account for the change in ratios or percentages.

Source: Vista Environmental.

FHWA Model Source Assumptions

To assess the roadway noise generation in a uniform manner, all vehicles are analyzed at the single lane equivalent acoustic center of the roadway being analyzed. In order to determine the height above the road grade where the noise is being emitted from, each type of vehicle has been analyzed independently with autos at road grade, medium trucks at 2.3 feet above road grade, and heavy trucks at 8 feet above road grade. These elevations were determined through a noise-weighted average of the elevation of the exhaust pipe, tires and mechanical parts in the engine, which are the primary noise emitters from a vehicle.

6.3 Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Table G gives approximate vibration levels for particular construction activities. The data in Table G provides a reasonable estimate for a wide range of soil conditions.

Table G – Vibration Source Levels for Construction Equipment

Equipment		Peak Particle Velocity (inches/second)	Approximate Vibration Level (L_v) at 25 feet
Pile driver (impact)	Upper range	1.518	112
	typical	0.644	104
Pile driver (sonic)	Upper range	0.734	105
	typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drill		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Federal Transit Administration, May 2006.

The construction-related and operational vibration impacts have been calculated through the vibration levels shown above in Table G and through typical vibration propagation rates. The equipment assumptions were based on the equipment lists provided in the Air Quality Analysis.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above existing levels without the proposed project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above noise levels existing without the proposed project; or
- Exposure of persons residing or working in the project area to excessive noise levels from aircraft.

7.2 Exposure of Persons to or Generation of Noise Levels in Excess of Standards

The proposed project would not expose persons to or generate noise levels in excess of standards established in the General Plan or Noise Ordinance or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the construction and operations of the proposed project and compares the noise levels to the City standards.

The proposed project would consist of the removal of 94,000 cubic yards of sediment from the Santa Anita Wash outlet and construction of a pump station and 7,000 foot long pipeline. The on-going operation of the proposed project would also require the periodic removal of sediment from the Santa Anita Wash outlet. Up to 2,000 cubic yards of accumulated sediment may need to be removed per year. It is anticipated that the periodic maintenance would utilize similar construction equipment to the initial vegetation and sediment removal activities, however with a much shorter duration.

The construction noise impacts and operational pump station noise sources have been analyzed separately below.

Construction Noise

Construction of the proposed project is anticipated to start in winter 2014 and be completed over a year. The phases of construction activities are anticipated to include: 1) pipeline construction, 2) paving, 3) dewatering of basin, 4) removal of vegetation, 5) sediment removal; 6) pump station construction. The anticipated on-site construction equipment for each phase of construction has been detailed above in Table D. The nearest sensitive receptors consist of single-family residential units located on the northwest side of the basin in the City of Arcadia and as near as 50 feet from where construction equipment would operate within the basin. There are also single-family homes on the south side of Clark Street in the City of El Monte that are as near as 35 feet from the where pipeline construction would occur within the Clark Street right-of-way.

Section 4261 of the City of Arcadia Municipal Code exempts construction noise from the City's noise level standards provided construction activities take place between the hours of 7:00 a.m. and 7:00 p.m., except for Sundays and holidays. Section 8.36.050(C)(1) of the City of El Monte Municipal Code

exempts construction noise for the City's noise level standards provided construction activities take place between the hours of 6:00 a.m. and 7:00 p.m. Monday through Friday or between the hours of 8:00 a.m. and 7:00 p.m. on Saturday and Sunday. Through adherence to the limitation of allowable construction times provided in Section 4261 City of Arcadia Municipal Code and Section 8.36.050(C)(1) of the City of El Monte Municipal Code, the construction-related noise levels would not exceed any standards. Impact would be less than significant.

Operational Pump Station Noise

The on-going operation of the proposed project would include the periodic operation of electric pumps in the proposed pump station. The electric pumps would be located partially underground and within the fully enclosed pump station. The nearest receptors to the pump station consist of industrial uses as near as 110 feet southeast of the proposed pump station and single-family residential units located as near as 1,000 feet northwest of the proposed pump station. All nearby receptors are in the City of Arcadia

Section 4610.3 of the City of Arcadia Municipal Code limits stationary source noise impacts for residential uses to 55 dBA between 7:00 a.m. and 10:00 p.m. and 50 dBA between 10:00 p.m. and 7:00 a.m. and for industrial uses to 70 dBA anytime of the day.

In order to determine the noise impacts created by the pump station, a reference noise measurement was taken of an operational electric water pump at 22958 Mission Drive in Carson, which measured a noise level of 68.1 dBA Leq at five feet from the electric pump. Based on a point noise source sound drop-off rate of 6 dB per of the distance between the source and receptor, this results in noise levels from the electric water pump of 41.3 dB at the nearest industrial use and 22.1 dB at the nearest residential use. The anticipated water pump noise levels are within the City of Arcadia stationary source noise standards. The noise created from the proposed project's pump station would result in a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

7.3 Generation of Excessive Groundborne Vibration

The proposed project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the proposed project.

Construction-Related Vibration Impacts

Construction activities can produce vibration that may be felt by adjacent uses. The proposed project would consist of the removal of 94,000 cubic yards of sediment from the Santa Anita Wash outlet and construction of a pump station and 7,000 foot long pipeline. The primary source of vibration during construction would be from the operation of a bulldozer. From Table G above a large bulldozer would create a vibration level of 0.089 inch per second PPV at 25 feet.

The nearest sensitive receptors to where a bulldozer would operate consist of single-family residential units located on the northwest side of the basin in the City of Arcadia and as near as 250 feet from

potential bulldozer operations. Based on typical propagation rates, the vibration level at the nearest off-site receptor would be 0.01 inch per second PPV. The vibration level at the nearest off-site receptor is below the 0.25 inch per second PPV threshold of perception for transient sources, that is detailed above in Section 4.2. Impacts would be less than significant.

Operations-Related Vibration Impacts

The on-going operation of the proposed project would not include the operation of any known vibration sources. Therefore, a less than significant vibration impact is anticipated from the operation of the proposed project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

7.4 Permanent Noise Level Increase

The ongoing operation of the proposed project may result in a potential permanent increase in ambient noise levels in the project vicinity above existing levels without the proposed project. Potential noise impacts associated with the operations of the proposed project would be from the periodic operation of electric pumps in the proposed pump station. The nearest receptors to the pump station consist of industrial uses as near as 110 feet southeast of the proposed pump station and single-family residential units located as near as 1,000 feet northwest of the proposed pump station. All nearby receptors are in the City of Arcadia

Section 4610.3 of the City of Arcadia Municipal Code limits stationary source noise impacts for residential uses to 55 dBA between 7:00 a.m. and 10:00 p.m. and 50 dBA between 10:00 p.m. and 7:00 a.m. and for industrial uses to 70 dBA anytime of the day.

The potential noise impacts from the proposed pump station have been analyzed above in Section 7.1, which found that the noise levels created from the electric water pump would be 41.3 dB at the nearest industrial use and 22.1 dB at the nearest residential use. The anticipated water pump noise levels are within the City of Arcadia stationary source noise standards. The noise created from the proposed project's pump station would result in a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

7.5 Temporary Noise Level Increase

The proposed project may create a temporary or periodic increase in ambient noise levels in the project vicinity above noise levels existing without the proposed project. The proposed project would consist of the removal of 94,000 cubic yards of sediment from the Santa Anita Wash outlet and construction of a pump station and 7,000 foot long pipeline. The on-going operation of the proposed project would also require the periodic removal of sediment from the Santa Anita Wash outlet. Up to 2,000 cubic yards of accumulated sediment may need to be removed per year. It is anticipated that the periodic maintenance would utilize similar construction equipment to the initial vegetation and sediment removal activities, however with a much shorter duration. The on-site construction equipment, off-site truck noise impacts have been analyzed separately below.

On-Site Construction Equipment Noise

Section 4261 of the City of Arcadia Municipal Code exempts construction noise from the City's noise level standards provided they take place between the hours of 7:00 a.m. and 7:00 p.m., except for Sundays and holidays. The analysis above in Section 7.2 found that the proposed project would conform to the City construction noise standards. However, the City construction noise standards do not provide any limits to the noise levels that may be created during construction activities at the nearby sensitive receptors and even with adherence to the City standards, the resultant construction noise levels may result in a significant substantial temporary noise increase at the nearby sensitive receptors.

In order to determine if the proposed construction activities would create a significant substantial temporary noise increase, the OSHA agency limits for noise exposure have been utilized. The use of a significance threshold using an OSHA standard is considered conservative. The OSHA standard limits noise exposure of workers to 90 dB or less over 8 continuous hours or 105 dB or less over 1 continuous hour and this standard has been utilized to analyze the construction noise impacts to the sensitive receptors located at the nearby off-site residences.

Construction noise impacts to the nearby sensitive receptors have been calculated through use of the RCNM and the parameters and assumptions detailed in Section 6.1 of this report including Table D – Construction Equipment Noise Emissions and Usage Factors. The results are shown below in Table H and the RCNM printouts are provided in Appendix C.

Table H – Construction Noise Levels at Nearby Receptors

Construction Phase	Distance to Nearest Receptor	Construction Noise Levels ¹	
		dBA Leq	dBA L _{max}
Pipeline Construction	35	86	93
Paving	35	79	82
Dewatering of Basin	165	72	71
Removal of Vegetation	250	69	68
Sediment Removal	250	68	68
Pump Station Construction	110	74	77
OSHA Construction Noise Standards		90	105

Notes:

¹ L_{max} is based on the maximum noise from the loudest piece of equipment and the Leq is the average noise from all equipment. Since there are multiple pieces of equipment being modeled the average noise may exceed the maximum noise from one piece of equipment.

Source: RCNM, Federal Highway Administration, 2006

Table H shows that greatest noise impacts would occur during the pipeline construction phase of construction, with noise levels as high as 86 dBA Leq and 93 dBA L_{max} at the nearest off-site residential

use. Table H shows that the noise levels from each phase of construction activities would be within the 90 dBA Leq and 105 dBA L_{max} thresholds detailed above. Furthermore, the calculated noise levels above do not account for the attenuation of the residential or industrial structures, which would reduce construction noise levels by 15 to 30 dB, depending on if the windows are open or closed. Therefore, a less than significant construction noise impact would occur from development of the proposed project.

Off-Site Vehicular Noise

The sediment removal activities for the proposed project would generate up to 200 daily round trips from haul trucks traveling between the project site and Manning Pit, located approximately six miles east of the project site in the City of Irwindale. The preferred truck route would travel from the project site to north on Peck Road, to east on Live Oak Avenue, to east on Arrow Way, to south on Vincent Avenue.

Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. The proposed project would not alter the speed limit on any existing roadway so the proposed project's potential offsite noise impacts have been focused on the noise impacts associated with the change of volume of traffic and change of the number of trucks in the flow of traffic that would occur with development of the proposed project.

The California Department of Health has developed the noise compatibility matrix, shown above in Figure 3, that has been adopted by the jurisdictions that may be impacted by the proposed project's vehicular noise and details normally acceptable noise levels for different land uses that include 60 dB CNEL for single-family homes. Neither the California Department of Health nor any of the local jurisdictions provide any direction for sensitive receptors that already exceed the normally acceptable noise levels for the Without Project condition, however the (Federal Transit Administration, 2006), which assesses noise and vibration impacts from transit projects found that when the ambient noise is between 60 and 64, a noise exposure increase of 2 dB is allowed before a significant impact would occur, when the ambient noise is between 65 and 74 dB Ldn, a noise exposure increase of 1 dB is allowed before a significant impact would occur and when the ambient noise exceeds 74 dB Ldn, any increase in noise exposure would create a significant impact.

The potential offsite traffic noise impacts created by the off-site vehicle trips generated from the proposed project have been analyzed through utilization of the FHWA Model and parameters described above in Section 6.2 and The FHWA model calculation printouts are provided in Appendix D. A comparison of the existing conditions to the with the proposed project's sediment removal haul truck trips conditions are provided in Table I.

Table I – Project Haul Truck Traffic Noise Contributions

Roadway	Segment	dBA CNEL at Nearest Residence ¹			Threshold
		Existing	Existing Plus Route 1A	Project Contribution	
Peck Road	South of Live Oak Avenue	61.7	61.8	0.1	> +2 dB
Live Oak Avenue	East of Peck Road	62.9	63.0	0.1	> +2 dB
Arrow Highway	East of Live Oak Avenue	60.6	60.7	0.1	> +2 dB
Arrow Highway	East of Azusa Canyon Road	67.6	67.7	0.1	> +1 dB
Arrow Highway	East of Irwindale Avenue	70.1	70.1	0.0	> +1 dB
Vincent Avenue	South of Arrow Highway	65.8	66.0	0.2	> +1 dB

Notes:

¹ Distance to nearest receptor shown in Table E, does not take into account existing noise barriers.

Source: FHWA Traffic Noise Prediction Model- FHWA-RD-77-108.

Table I shows that the project haul truck traffic noise contributions to the preferred route to Manning Pit, would increase the roadway noise by up to 0.2 dB. The proposed project would not cause the noise level at any nearby home to exceed the normally compatible noise residential standard for the with project condition that did not already exceed the standards for the without project condition. The project's contribution to off-site vehicular noise would result in a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

7.6 Aircraft Noise

The proposed project would not expose people residing or working in the project area to excessive noise levels from aircraft. The nearest airport is El Monte Airport Base, located as near as ½ mile from the spreading basin. Although, aircraft noise is the predominant noise source at the portions of the basin that are not near roads, the proposed project would not introduce any new noise sensitive receptors to the study area. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

8.0 REFERENCES

California Department of Transportation (Caltrans), *Technical Noise Supplement*, November 2009.

California Department of Transportation, *Transportation- and Construction-Induced Vibration Guidance Manual*, June, 2004

City of Arcadia, *Arcadia General Plan*, November 2010.

City of Arcadia, *Arcadia Municipal Code*, July 2013.

City of El Monte, *El Monte, California, Code of Ordinances*, June 2012.

City of Irwindale, *City of Irwindale General Plan Update*, June 2008.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

U.S. Department of Transportation, *FHWA Roadway Construction Noise Model User's Guide*, January, 2006.

Vista Environmental, *Air Quality and Global Climate Change Impact Analysis Peck Water Spreading Basin Project*, December 18, 2013.

APPENDIX A

Study Area Photo Index



Noise Measurement Site 1 - looking north



Noise Measurement Site 1 - looking northeast



Noise Measurement Site 1 - looking east



Noise Measurement Site 1 - looking southeast



Noise Measurement Site 1 - looking south



Noise Measurement Site 1 - looking southwest



Noise Measurement Site 1 - looking west



Noise Measurement Site 1 - looking northwest



Noise Measurement Site 2 - looking north



Noise Measurement Site 2 - looking northeast



Noise Measurement Site 2 - looking east



Noise Measurement Site 2 - looking southeast



Noise Measurement Site 2 - looking south



Noise Measurement Site 2 - looking southwest



Noise Measurement Site 2 - looking west



Noise Measurement Site 2 - looking northwest



Noise Measurement Site 3 - looking north



Noise Measurement Site 3 - looking northeast



Noise Measurement Site 3 - looking east



Noise Measurement Site 3 - looking southeast



Noise Measurement Site 3 - looking south



Noise Measurement Site 3 - looking southwest



Noise Measurement Site 3 - looking west



Noise Measurement Site 3 - looking northwest

APPENDIX B

Field Noise Measurement Printouts

General Information													
Serial Number	02509												
Model	831												
Firmware Version	2.112												
Filename	831_Data.001												
User	GT												
Job Description	Peck Road Water Spreading Basin												
Location	Near the proposed Staging Are next to Santa Anita Wash												
Measurement Description													
Start Time	Thursday, 2013 August 22 15:18:01												
Stop Time	Thursday, 2013 August 22 15:33:01												
Duration	00:15:00.5												
Run Time	00:15:00.5												
Pause	00:00:00.0												
Pre Calibration	Thursday, 2013 August 22 15:07:52												
Post Calibration	None												
Calibration Deviation	---												
Note													
260 feet south of nearest home													
96 F, 29.42 in Hg, 22% Hu, 8 mph wind, clear sky													
Overall Data													
LAeq			45.3	dB									
LASmax	2013 Aug 22 15:30:30		59.3	dB									
LApeak (max)	2013 Aug 22 15:26:03		94.4	dB									
LASmin	2013 Aug 22 15:27:37		38.7	dB									
LCeq			62.1	dB									
LAeq			45.3	dB									
LCeq - LAeq			16.8	dB									
LA1eq			49.8	dB									
LAeq			45.3	dB									
LA1eq - LAeq			4.5	dB									
Ldn			45.3	dB									
LDay 07:00-23:00			45.3	dB									
LNight 23:00-07:00			---	dB									
Lden			45.3	dB									
LDay 07:00-19:00			45.3	dB									
LEvening 19:00-23:00			---	dB									
LNight 23:00-07:00			---	dB									
LAE			74.9	dB									
# Overloads			0										
Overload Duration			0.0	s									
# OBA Overloads			0										
OBA Overload Duration			0.0	s									
Statistics													
LAS5.00			48.7	dBA									
LAS10.00			46.3	dBA									
LAS33.30			43.3	dBA									
LAS50.00			42.1	dBA									
LAS66.60			41.0	dBA									
LAS90.00			39.7	dBA									
LAS > 65.0 dB (Exceedence Counts / Duration)		0 /	0.0	s									
LAS > 85.0 dB (Exceedence Counts / Duration)		0 /	0.0	s									
LApeak > 135.0 dB (Exceedence Counts / Duration)		0 /	0.0	s									
LApeak > 137.0 dB (Exceedence Counts / Duration)		0 /	0.0	s									
LApeak > 140.0 dB (Exceedence Counts / Duration)		0 /	0.0	s									
Settings													
RMS Weight			A Weighting										
Peak Weight			A Weighting										
Detector			Slow										
Preamp			PRM831										
Integration Method			Linear										
OBA Range			Normal										
OBA Bandwidth			1/1 and 1/3										
OBA Freq. Weighting			Z Weighting										
OBA Max Spectrum			Bin Max										
Gain			+0	dB									
Under Range Limit			26.2	dB									
Under Range Peak			75.8	dB									
Noise Floor			17.0	dB									
Overload			143.4	dB									
1/1 Spectra													
Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k	
LZeq	70.1	64.1	57.0	55.1	57.5	47.7	41.2	37.5	36.2	36.8	39.7	43.1	
LZSmax	84.0	76.8	70.6	66.9	74.3	65.0	55.6	51.3	54.8	45.4	40.2	43.2	
LZSmin	49.1	52.1	49.7	48.1	45.7	39.7	34.8	34.6	33.5	36.0	39.5	42.9	

Calibration History			
Preamp	Date		dB re. 1V/Pa
PRM831	22 Aug 2013 15:07:50		-25.8
PRM831	27 Jul 2013 17:53:07		-25.9
PRM831	27 Jul 2013 13:36:08		-25.6
PRM831	28 Apr 2013 15:34:24		-25.9
PRM831	23 Apr 2013 10:17:33		-25.0
PRM831	27 Feb 2013 19:15:30		-25.7
PRM831	24 Jan 2013 12:00:16		-25.6
PRM831	15 Jan 2013 07:50:44		-26.2
PRM831	04 Jan 2013 13:47:46		-26.5

General Information													
Serial Number	02509												
Model	831												
Firmware Version	2.112												
Filename	831_Data.002												
User	GT												
Job Description	Peck Road Water Spreading Basin Project												
Location	In front of home at 12012 Clark Rd												
Measurement Description													
Start Time	Thursday, 2013 August 22 15:49:16												
Stop Time	Thursday, 2013 August 22 16:04:16												
Duration	00:15:00.5												
Run Time	00:15:00.5												
Pause	00:00:00.0												
Pre Calibration	Thursday, 2013 August 22 15:07:50												
Post Calibration	None												
Calibration Deviation	---												
Note													
Approximately 35 feet south of Clark St and 150 feet east of Cogswell Rd													
96 F, 29.42 in Hg, 22% Hu, 8 mph wind, clear sky													
Overall Data													
LAeq			55.8	dB									
LASmax	2013 Aug 22 15:56:33		71.7	dB									
LApeak (max)	2013 Aug 22 16:01:29		88.5	dB									
LASmin	2013 Aug 22 15:59:12		45.2	dB									
LCeq			65.2	dB									
LAeq			55.8	dB									
LCeq - LAeq			9.3	dB									
LA1eq			58.7	dB									
LAeq			55.8	dB									
LA1eq - LAeq			2.9	dB									
Ldn			55.8	dB									
LDay 07:00-23:00			55.8	dB									
LNight 23:00-07:00			---	dB									
Lden			55.8	dB									
LDay 07:00-19:00			55.8	dB									
LEvening 19:00-23:00			---	dB									
LNight 23:00-07:00			---	dB									
LAE			85.4	dB									
# Overloads			0										
Overload Duration			0.0	s									
# OBA Overloads			0										
OBA Overload Duration			0.0	s									
Statistics													
LAS5.00			62.0	dBA									
LAS10.00			57.7	dBA									
LAS33.30			51.5	dBA									
LAS50.00			49.4	dBA									
LAS66.60			48.1	dBA									
LAS90.00			46.6	dBA									
LAS > 65.0 dB (Exceedence Counts / Duration)		9 /	34.0	s									
LAS > 85.0 dB (Exceedence Counts / Duration)		0 /	0.0	s									
LApeak > 135.0 dB (Exceedence Counts / Duration)		0 /	0.0	s									
LApeak > 137.0 dB (Exceedence Counts / Duration)		0 /	0.0	s									
LApeak > 140.0 dB (Exceedence Counts / Duration)		0 /	0.0	s									
Settings													
RMS Weight			A Weighting										
Peak Weight			A Weighting										
Detector			Slow										
Preamp			PRM831										
Integration Method			Linear										
OBA Range			Normal										
OBA Bandwidth			1/1 and 1/3										
OBA Freq. Weighting			Z Weighting										
OBA Max Spectrum			Bin Max										
Gain			+0	dB									
Under Range Limit			26.2	dB									
Under Range Peak			75.8	dB									
Noise Floor			17.0	dB									
Overload			143.4	dB									
1/1 Spectra													
Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k	
LZeq	69.5	63.8	60.0	60.3	59.6	52.6	50.8	53.0	47.7	40.6	40.2	43.1	
LZSmax	83.0	79.2	79.8	78.1	76.2	66.3	66.8	69.4	63.2	58.9	51.4	44.2	
LZSmin	50.2	54.1	51.8	52.6	49.7	45.9	40.9	39.7	36.7	36.6	39.7	43.0	

1/3 Spectra												
Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	66.7	64.2	62.0	61.0	58.2	57.0	55.3	55.3	54.9	54.5	55.0	56.4
LZSmax	80.6	78.6	75.9	74.3	75.2	74.6	71.9	75.1	77.2	74.6	72.3	74.4
LZSmin	44.5	42.5	44.4	50.4	46.1	45.1	45.0	47.1	44.6	46.3	47.8	47.0
Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	57.0	54.2	52.1	49.0	48.6	45.2	45.0	46.0	46.8	48.2	48.7	47.6
LZSmax	74.6	68.8	70.8	65.1	61.5	59.4	60.5	64.3	64.6	65.9	65.4	62.9
LZSmin	46.0	44.2	41.8	40.8	41.6	37.7	36.2	36.5	35.8	35.6	34.9	33.6
Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	45.4	42.1	38.6	37.0	35.5	34.5	34.5	35.2	36.4	37.1	38.0	39.8
LZSmax	60.9	58.6	55.6	55.1	54.9	52.1	49.5	45.5	41.5	39.5	38.9	40.0
LZSmin	32.5	31.1	31.2	31.0	31.7	32.3	33.4	34.6	35.9	36.8	37.8	39.6

Calibration History												
Preamp	Date					dB re. 1V/Pa						
PRM831	22	Aug	2013	15:07:50								-25.8
PRM831	27	Jul	2013	17:53:07								-25.9
PRM831	27	Jul	2013	13:36:08								-25.6
PRM831	28	Apr	2013	15:34:24								-25.9
PRM831	23	Apr	2013	10:17:33								-25.0
PRM831	27	Feb	2013	19:15:30								-25.7
PRM831	24	Jan	2013	12:00:16								-25.6
PRM831	15	Jan	2013	07:50:44								-26.2
PRM831	04	Jan	2013	13:47:46								-26.5

General Information				
Serial Number			02509	
Model			831	
Firmware Version			2.112	
Filename			831_Data.003	
User			GT	
Job Description		Peck Road Water Spreading Basin		
Location		At Irwindale Senior Center		
Measurement Description				
Start Time		Thursday, 2013 August 22 16:44:11		
Stop Time		Thursday, 2013 August 22 16:59:41		
Duration		00:15:30.5		
Run Time		00:15:30.5		
Pause		00:00:00.0		
Pre Calibration		Thursday, 2013 August 22 15:07:50		
Post Calibration				None
Calibration Deviation				---

Note
At 16116 Arrow Hwy. Approximately 60 feet south of Arrow Hwy CL and just east of front entry way
96 F, 29.42 in Hg, 22% Hu, 8 mph wind, clear sky

Overall Data				
LAeq			72.9	dB
LASmax	2013 Aug 22 16:58:39		87.2	dB
LApeak (max)	2013 Aug 22 16:58:38		100.6	dB
LASmin	2013 Aug 22 16:50:27		51.3	dB
LCeq			80.0	dB
LAeq			72.9	dB
LCeq - LAeq			7.1	dB
LA1eq			73.9	dB
LAeq			72.9	dB
LA1eq - LAeq			1.0	dB
Ldn			72.9	dB
LDay 07:00-23:00			72.9	dB
LNight 23:00-07:00			---	dB
Lden			72.9	dB
LDay 07:00-19:00			72.9	dB
LEvening 19:00-23:00			---	dB
LNight 23:00-07:00			---	dB
LAE			102.6	dB
# Overloads			0	
Overload Duration			0.0	s
# OBA Overloads			0	
OBA Overload Duration			0.0	s

Statistics				
LAS5.00			77.4	dBA
LAS10.00			76.4	dBA
LAS33.30			73.5	dBA
LAS50.00			70.7	dBA
LAS66.60			66.9	dBA
LAS90.00			57.5	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)		15 / 742.5		s
LAS > 85.0 dB (Exceedence Counts / Duration)		1 / 3.0		s
LApeak > 135.0 dB (Exceedence Counts / Duration)		0 / 0.0		s
LApeak > 137.0 dB (Exceedence Counts / Duration)		0 / 0.0		s
LApeak > 140.0 dB (Exceedence Counts / Duration)		0 / 0.0		s

Settings				
RMS Weight		A Weighting		
Peak Weight		A Weighting		
Detector		Slow		
Preamp		PRM831		
Integration Method		Linear		
OBA Range		Normal		
OBA Bandwidth		1/1 and 1/3		
OBA Freq. Weighting		Z Weighting		
OBA Max Spectrum		Bin Max		
Gain		+0		dB
Under Range Limit		26.2		dB
Under Range Peak		75.8		dB
Noise Floor		17.0		dB
Overload		143.4		dB

1/1 Spectra													
Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k	
LZeq	65.1	69.3	69.1	75.8	74.8	71.1	68.7	69.9	64.2	54.3	45.9	43.6	
LZSmax	83.6	87.2	85.0	93.9	93.0	92.6	87.1	79.9	75.7	68.9	64.7	58.7	
LZSmin	47.8	55.9	59.1	59.8	57.9	50.8	46.9	46.2	42.1	38.1	39.5	42.9	

1/3 Spectra												
Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	61.1	59.9	60.2	60.2	61.7	67.8	62.1	62.6	66.7	67.8	73.8	69.0
LZSmax	77.6	75.6	83.4	79.4	80.2	85.8	75.8	74.5	84.7	83.9	93.9	86.5
LZSmin	39.8	40.2	43.2	46.9	49.0	51.4	51.7	52.4	54.3	51.0	54.5	53.8
Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	70.4	71.7	66.8	67.3	66.5	65.2	63.9	64.0	63.8	65.2	65.9	64.2
LZSmax	90.3	92.4	83.4	89.8	87.3	86.9	84.7	82.0	76.9	75.8	75.5	74.4
LZSmin	49.8	53.2	50.3	45.9	46.2	43.4	42.3	41.7	42.0	41.2	41.7	40.5
Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	62.1	58.3	55.0	51.9	48.8	45.5	42.8	40.8	39.0	38.4	38.4	39.7
LZSmax	73.1	69.3	68.5	66.1	63.6	61.7	60.9	59.9	59.2	56.5	53.4	47.9
LZSmin	38.4	36.8	35.0	33.5	33.0	33.1	33.6	34.6	35.7	36.9	37.7	39.4

Calibration History												
Preamp	Date									dB re. 1V/Pa		
PRM831	22 Aug 2013 15:07:50									-25.8		
PRM831	27 Jul 2013 17:53:07									-25.9		
PRM831	27 Jul 2013 13:36:08									-25.6		
PRM831	28 Apr 2013 15:34:24									-25.9		
PRM831	23 Apr 2013 10:17:33									-25.0		
PRM831	27 Feb 2013 19:15:30									-25.7		
PRM831	24 Jan 2013 12:00:16									-25.6		
PRM831	15 Jan 2013 07:50:44									-26.2		
PRM831	04 Jan 2013 13:47:46									-26.5		

APPENDIX C

RCNM Model Construction Noise Calculations

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/4/2013

Case Description: Peck Road Spreading Basin - Pipeline Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
SFR - south side of Clark St	Residential	55.8	55.8	55.8

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Concrete Saw	No	20		89.6	35	0
Excavator	No	40		80.7	85	0
Front End Loader	No	40		79.1	135	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Noise Limits (dBA) Evening	
			Lmax	Leq	Lmax	Leq
Concrete Saw	92.7	85.7	N/A	N/A	N/A	N/A
Excavator	76.1	72.1	N/A	N/A	N/A	N/A
Front End Loader	70.5	66.5	N/A	N/A	N/A	N/A
Total	93	86	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/4/2013
Case Description: Peck Road Spreading Basin - Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
SFR - south side of Clark St	Residential	55.8	55.8	55.8

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Concrete Mixer Truck	No	40		78.8	35	0
Paver	No	50		77.2	85	0
Roller	No	20		80	135	0
Tractor	No	40	84		185	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	81.9	77.9	N/A	N/A	N/A	N/A
Paver	72.6	69.6	N/A	N/A	N/A	N/A
Roller	71.4	64.4	N/A	N/A	N/A	N/A
Tractor	72.6	68.7	N/A	N/A	N/A	N/A
Total	82	79	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/4/2013
Case Description: Peck Road Spreading Basin - Dewatering

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
SFR near SW portion of Basin	Residential	45.3	45.3	45.3

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Pumps	No	50		80.9	165	0
Pumps	No	50		80.9	185	0
Pumps	No	50		80.9	205	0
Pumps	No	50		80.9	225	0

Equipment	Results				Noise Limits (dBA)	
	Calculated (dBA)		Day Lmax	Evening Leq	Lmax	Leq
	*Lmax	Leq				
Pumps	70.6	67.6	N/A	N/A	N/A	N/A
Pumps	69.6	66.6	N/A	N/A	N/A	N/A
Pumps	68.7	65.7	N/A	N/A	N/A	N/A
Pumps	67.9	64.9	N/A	N/A	N/A	N/A
Total	71	72	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/4/2013

Case Description: Peck Road Spreading Basin - Removal of Vegetation

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
SFR near NW portion of Basin	Residential	45.3	45.3	45.3

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Dozer	No	40		81.7	250	0
Excavator	No	40		80.7	300	0
Tractor	No	40	84		350	0
Tractor	No	40	84		400	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Noise Limits (dBA) Evening	
			Lmax	Leq	Lmax	Leq
Dozer	67.7	63.7	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A
Tractor	67.1	63.1	N/A	N/A	N/A	N/A
Tractor	65.9	62.0	N/A	N/A	N/A	N/A
Total	68	69	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/4/2013

Case Description: Peck Road Spreading Basin - Sediment Removal

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
SFR near NW portion of Basin	Residential	45.3	45.3	45.3

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Dozer	No	40		81.7	250	0
Excavator	No	40		80.7	300	0
Tractor	No	40	84		350	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Noise Limits (dBA) Evening	
			Lmax	Leq	Lmax	Leq
Dozer	67.7	63.7	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A
Tractor	67.1	63.1	N/A	N/A	N/A	N/A
Total	68	68	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/4/2013
Case Description: Peck Road Spreading Basin - Pump Station

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Industrial on East side of Basin	Industrial	55.8	55.8	55.8

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Gradall	No	40		83.4	110	0
Crane	No	16		80.6	160	0
Generator	No	50		80.6	210	0
Tractor	No	40	84		260	0
Welder / Torch	No	40		74	310	0

Equipment	Results				Noise Limits (dBA)	
	Calculated (dBA)		Day		Evening	
	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Gradall	76.6	72.6	N/A	N/A	N/A	N/A
Crane	70.4	62.5	N/A	N/A	N/A	N/A
Generator	68.2	65.2	N/A	N/A	N/A	N/A
Tractor	69.7	65.7	N/A	N/A	N/A	N/A
Welder / Torch	58.2	54.2	N/A	N/A	N/A	N/A
Total	77	74	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

APPENDIX D

FHWA RD-77-108 Model Roadway Noise Calculations

Scenario: EXISTING CONDITIONS

Vehicle Mix 3 (Secondary With Project)

Vehicle Mix 2 (Arterial With Project)

Vehicle Mix 1 (Without Project)

Vehicle Type	Day			Evening			Night					
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night			
Automobiles	69.50%	12.90%	9.60%	92.00%	68.91%	12.78%	9.51%	91.20%	67.67%	12.51%	9.31%	89.50%
Medium Trucks	1.44%	0.06%	1.50%	3.00%	1.43%	0.06%	1.49%	2.97%	1.40%	0.06%	1.46%	2.91%
Heavy Trucks	2.40%	0.10%	2.50%	5.00%	3.28%	0.10%	2.48%	5.86%	5.16%	0.10%	2.43%	7.68%

Road Name: Peck Road

Segment: South of Live Oak Avenue

: 40 MPH

Vehicle Mix: 1

Ros

Roadway Classification: Arterial

Vehicle Type	NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 126.49 ft)										Centerline Distance to Noise Contour (in feet)		
	Noise Adjustments				Unmitigated Noise Levels								
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.		Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	67.36	1.57	-6.15	-1.20	61.58	59.20	57.91	51.86	60.29	60.92	70 dBA:	34	36
Medium Trucks	76.31	-13.30	-6.15	-1.20	55.66	36.45	28.67	37.88	44.04	44.07	65 dBA:	72	78
Heavy Trucks	81.16	-11.08	-6.15	-1.20	62.73	45.74	37.96	47.17	53.32	53.35	60 dBA:	156	169
	Total:				65.66	59.42	57.96	53.25	61.17	61.70	55 dBA:	335	363

Road Name: Live Oak Avenue

Segment:

: 45 MPH

Vehicle Mix: 1

Ros

Roadway Classification: Arterial

Vehicle Type	NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 126.49 ft)										Centerline Distance to Noise Contour (in feet)		
	Noise Adjustments				Unmitigated Noise Levels						Ldn	CNEL	
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.		Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	69.34	0.97	-6.15	-1.20	62.97	60.60	59.30	53.25	61.68	62.31	70 dBA:	40	44
Medium Trucks	77.62	-13.89	-6.15	-1.20	56.38	37.17	29.39	38.60	44.75	44.79	65 dBA:	87	95
Heavy Trucks	82.14	-11.67	-6.15	-1.20	63.12	46.13	38.35	47.55	53.71	53.74	60 dBA:	188	204
	Total:				66.50	60.77	59.34	54.40	62.40	62.94	55 dBA:	405	440

Road Name: Arrow Highway

Segment: East of Live Oak Avenue

: 45 MPH

Vehicle Mix: 1

Ros

Roadway Classification: Arterial

	NOISE PARAMETERS AT 240 FEET FROM CENTERLINE (Equiv. Lane Dist: 238.12 ft)										Centerline Distance to Noise Contour (in feet)	
	Noise Adjustments				Unmitigated Noise Levels						Ldn	CNEL
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Vehicle Type												
Automobiles	69.34	2.75	-10.27	-1.20	60.63	58.26	56.96	50.91	59.34	59.97	52	57
Medium Trucks	77.62	-12.11	-10.27	-1.20	54.04	34.83	27.05	36.26	42.41	42.45	112	122
Heavy Trucks	82.14	-9.89	-10.27	-1.20	60.78	43.79	36.01	45.21	51.37	51.40	242	263
	Total:				64.16	58.43	57.00	52.06	60.06	60.60	522	567

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: Peck Road Spreading Basin
Site Conditions: Soft

Road Name: Arrow Highway		Segment: East of Azusa Canyon Road		Roadway Classification: Arterial									
Average Daily Traffic: 33250 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 90 FEET FROM CENTERLINE		(Equiv. Lane Dist: 84.85 ft)		Centerline Distance to Noise Contour (in feet)									
Noise Adjustments		Unmitigated Noise Levels											
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	69.34	3.02	-3.55	-1.20	67.61	65.24	63.95	57.89	66.33	66.96	70 dBA:	57	62
Medium Trucks	77.62	-11.85	-3.55	-1.20	61.03	41.82	34.04	43.24	49.40	49.43	65 dBA:	123	134
Heavy Trucks	82.14	-9.63	-3.55	-1.20	67.76	50.77	42.99	52.20	58.35	58.39	60 dBA:	265	289
Total:				71.14	65.41	63.99	59.05	67.04	67.59	55 dBA:	572	622	

Road Name: Arrow Highway		Segment: East of Irwindale Avenue		Roadway Classification: Arterial									
Average Daily Traffic: 28301 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE		(Equiv. Lane Dist: 51.96 ft)		Centerline Distance to Noise Contour (in feet)									
Noise Adjustments		Unmitigated Noise Levels											
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	69.34	2.32	-0.35	-1.20	70.11	67.74	66.44	60.39	68.82	69.45	70 dBA:	56	61
Medium Trucks	77.62	-12.55	-0.35	-1.20	63.52	44.31	36.53	45.74	51.89	51.93	65 dBA:	120	131
Heavy Trucks	82.14	-10.33	-0.35	-1.20	70.26	53.27	45.49	54.69	60.85	60.88	60 dBA:	259	282
Total:				73.64	67.91	66.48	61.54	69.54	70.08	55 dBA:	559	608	

Road Name: Vincent Avenue		Segment: South of Arrow Highway		Roadway Classification: Secondary									
Average Daily Traffic: 9757 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE		(Equiv. Lane Dist: 49.36 ft)		Centerline Distance to Noise Contour (in feet)									
Noise Adjustments		Unmitigated Noise Levels											
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	69.34	-2.31	-0.02	-1.20	65.82	63.45	62.15	56.10	64.53	65.16	70 dBA:	24	26
Medium Trucks	77.62	-17.17	-0.02	-1.20	59.23	40.02	32.24	41.45	47.60	47.64	65 dBA:	52	56
Heavy Trucks	82.14	-14.95	-0.02	-1.20	65.97	48.98	41.20	50.41	56.56	56.59	60 dBA:	112	122
Total:				69.35	63.62	62.19	57.25	65.25	65.79	55 dBA:	241	262	

Project: Peck Road Spreading Basin
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Without Project)			Vehicle Mix 2 (Arterial With Project)			Vehicle Mix 3 (Secondary With Project)		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Automobiles	69.50%	12.90%	9.60%	68.91%	12.78%	9.51%	67.67%	12.51%	9.31%
Medium Trucks	1.44%	0.06%	1.50%	1.43%	0.06%	1.49%	1.40%	0.06%	1.46%
Heavy Trucks	2.40%	0.10%	2.50%	3.28%	0.10%	2.48%	5.16%	0.10%	2.43%

Road Name: Peck Road		Segment: South of Live Oak Avenue				Roadway Classification: Arterial			
Average Daily Traffic: 21358 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2					
		NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 126.49 ft)				Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	67.36	1.57	-6.15	61.58	59.17	57.87	51.82	60.25	60.88
Medium Trucks	76.31	-13.30	-6.15	55.66	36.41	28.63	37.84	43.99	44.03
Heavy Trucks	81.16	-10.35	-6.15	63.46	47.82	38.64	47.85	54.15	54.18
		Total:		66.05	59.50	57.93	53.40	61.29	61.80

Road Name: Live Oak Avenue		Segment: East of Peck Road		Roadway Classification: Arterial								
Average Daily Traffic: 20965 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 2								
		NOISE PARAMETERS AT 130 FEET FROM CENTERLINE				(Equiv. Lane Dist: 126.49 ft)				Centerline Distance to Noise Contour (in feet)		
		Noise Adjustments		Unmitigated Noise Levels								
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	69.34	0.98	-6.15	-1.20	62.97	60.56	59.26	53.21	61.64	62.27	70 dBA: 41	45
Medium Trucks	77.62	-13.89	-6.15	-1.20	56.38	37.13	29.35	38.56	44.71	44.74	65 dBA: 88	96
Heavy Trucks	82.14	-10.95	-6.15	-1.20	63.85	48.21	39.03	48.24	54.54	54.57	60 dBA: 191	207
		Total:		66.85	60.83	59.31	54.52	62.49	63.02	55 dBA: 410	445	

Road Name: Arrow Highway		Segment: East of Live Oak Avenue		Roadway Classification: Arterial									
Average Daily Traffic: 31487 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 2									
NOISE PARAMETERS AT 240 FEET FROM CENTERLINE		(Equiv. Lane Dist: 238.12 ft)											
		Unmitigated Noise Levels		Centerline Distance to Noise Contour (in feet)									
Vehicle Type	REMELE Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	69.34	2.74	-10.27	-1.20	60.62	58.21	56.91	50.86	59.29	59.92	70 dBA:	53	57
Medium Trucks	77.62	-12.13	-10.27	-1.20	54.02	34.77	26.99	36.20	42.36	42.39	65 dBA:	114	123
Heavy Trucks	82.14	-9.18	-10.27	-1.20	61.49	45.86	36.68	45.89	52.18	52.21	60 dBA:	245	266
		Total:		64.49	58.47	56.96	52.17	60.13	60.67	55 dBA:	528	573	

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: Peck Road Spreading Basin
Site Conditions: Soft

Road Name: Arrow Highway		Segment: East of Azusa Canyon Road		Roadway Classification: Arterial								
Average Daily Traffic: 33450 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 90 FEET FROM CENTERLINE		(Equiv. Lane Dist: 84.85 ft)		Centerline Distance to Noise Contour (in feet)								
Noise Adjustments		Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	69.34	3.01	-3.55	-1.20	67.60	65.19	63.89	57.84	66.27	66.90	70 dBA: 58	63
Medium Trucks	77.62	-11.86	-3.55	-1.20	61.01	41.76	33.98	43.19	49.34	49.37	65 dBA: 125	135
Heavy Trucks	82.14	-8.92	-3.55	-1.20	68.48	52.84	43.66	52.87	59.17	59.20	60 dBA: 268	291
Total:				71.48	65.46	63.94	59.15	67.12	67.65	55 dBA: 578	627	

Road Name: Arrow Highway		Segment: East of Irwindale Avenue		Roadway Classification: Arterial								
Average Daily Traffic: 28501 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE		(Equiv. Lane Dist: 51.96 ft)		Centerline Distance to Noise Contour (in feet)								
Noise Adjustments		Unmitigated Noise Levels										
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	69.34	2.31	-0.35	-1.20	70.10	67.69	66.39	60.34	68.77	69.40	70 dBA: 57	61
Medium Trucks	77.62	-12.56	-0.35	-1.20	63.51	44.26	36.48	45.68	51.84	51.87	65 dBA: 122	132
Heavy Trucks	82.14	-9.61	-0.35	-1.20	70.97	55.34	46.16	55.37	61.67	61.70	60 dBA: 263	285
Total:				73.98	67.96	66.44	61.65	69.62	70.15	55 dBA: 566	614	

Road Name: Vincent Avenue		Segment: South of Arrow Highway		Roadway Classification: Secondary								
Average Daily Traffic: 9957 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 3								
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE		(Equiv. Lane Dist: 49.36 ft)		Centerline Distance to Noise Contour (in feet)								
Noise Adjustments		Unmitigated Noise Levels										
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	69.34	-2.34	-0.02	-1.20	65.79	63.30	61.99	55.94	64.37	65.00	70 dBA: 25	27
Medium Trucks	77.62	-17.22	-0.02	-1.20	59.19	39.85	32.06	41.27	47.43	47.46	65 dBA: 54	58
Heavy Trucks	82.14	-13.00	-0.02	-1.20	67.92	54.25	43.02	52.22	58.82	58.85	60 dBA: 116	126
Total:				70.34	63.83	62.05	57.58	65.51	66.01	55 dBA: 251	271	

APPENDIX G – JURISDICTIONAL DELINEATION REPORT



**JURISDICTIONAL DELINEATION REPORT
FOR THE PECK WATER CONSERVATION
IMPROVEMENT PROJECT
ARCADIA, CALIFORNIA**

Prepared for:

**COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
900 S Fremont Ave
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June 2014

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SECTION 1.0 – INTRODUCTION

The Peck Road Spreading Basin consists of a former gravel mining pit that over decades, has provided an area for riparian and wetland establishment. Chambers Group, Inc. (Chambers Group) was retained by the County of Los Angeles Department of Public Works (LACDPW) to conduct a Jurisdictional and Wetland Delineation of the proposed Project site.

1.1 PROJECT BACKGROUND

Peck Road Spreading Basin is owned and operated by the County of Los Angeles Flood Control District (LACFCD). The spreading basin and surrounding area was originally a gravel mining pit that was converted to a spreading basin by LACFCD in the late 1950s. LACFCD is now administered by LACDPW.

The adjacent Peck Road Water Conservation Park was established in 1975 by the County of Los Angeles Department of Parks and Recreation. Recreation opportunities include bicycle riding, picnicking, hiking, and fishing; trout are periodically stocked by the California Department of Fish and Wildlife (CDFW) (USEPA 2012). Visitors are not allowed to boat or swim in the basin.

Over the years, storm flows have brought sediment into the basin which has accumulated south of the Santa Anita Wash outlet and west of the Sawpit Wash outlet. The sediment accumulation at the mouth of Santa Anita Wash restricts water flows and causes a separation between the northern and southern portions of the spreading basin, decreasing the overall storage capacity. In addition, the facility's percolation is currently limited due to the accumulated sediment. High uncontrolled flows from Santa Anita Wash and Sawpit Wash can cause the basin to fill up quickly and allow the water to be wasted through the Rio Hondo Channel to the ocean.

1.2 PROJECT OBJECTIVES

The Peck Road Spreading Basin (spreading basin) has low percolation rates and major sediment accumulation due to uncontrolled storm flows from Santa Anita Wash and Sawpit Wash. The spreading basin's percolation rate into the Main San Gabriel Groundwater Basin is reduced due to an underlying clay layer. The low percolation rate in the spreading basin limits the amount of water that can be captured for recharge and can cause the basin to fill up quickly, allowing the water to be wasted through the concrete-lined Rio Hondo Channel to the ocean. Additionally the sediment accumulation restricts water flows and causes a separation between the northern and southern portions of the spreading basin.

The Peck Water Conservation Improvement Project (Project) has been designed to address these adverse conditions. The Project would construct a pump station and a 7,000-foot pipeline to transfer water to the soft-bottom San Gabriel River. The San Gabriel River has much greater percolation rates and also percolates into the Main San Gabriel Groundwater Basin, which would improve water supply sustainability efforts. The Project also involves the excavation and removal of the accumulated sediment within the spreading basin, thereby removing water flow constrictions.

1.3 PROJECT LOCATION

The Project is located in the Los Angeles River Watershed in the southeastern portion of the City of Arcadia, the southernmost portion of the City of Monrovia, and the southwestern portion of the City of

Irwindale (see Figure 1). The spreading basin is surrounded by the Cities of Irwindale to the east and El Monte to the south. Staging area activities, the truck access route, and a portion of excavation activities located near the northern portion of the spreading basin are within the City of Monrovia (see Figure 2). The pump station and inlet structure and the majority of the excavation activities are within the City of Arcadia. The proposed pipeline extends eastward from the spreading basin along a narrow strip of land within the southeastern portion of the City of Arcadia and is surrounded by the Cities of Irwindale to the north and El Monte to the south. The easternmost segment of the proposed pipeline and the outlet structure that connects to the San Gabriel River are located in the City of Irwindale.

The Project site consists of a former gravel mining pit that spans over 0.75 mile in length by 0.25 mile in width. The spreading basin consists of one deep basin with a total storage capacity of 3,600 acre-feet and current maximum depth of 55 feet; however, due to sediment accumulation, the current capacity is approximately 3,230 acre-feet. The facility is owned by the LACFCD and is one of the largest water conservation facilities that recharges the Main San Gabriel Groundwater Basin.

The proposed pipeline alignment generally traverses Clark Street east to the San Gabriel River. The San Gabriel River also recharges the Main San Gabriel Groundwater Basin and terminates at the Pacific Ocean.



Legend

- Project Boundary
- Pipeline Alignment
- City Boundaries

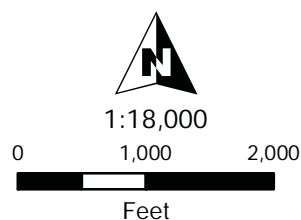


Figure 1
Peck Water Conservation
Improvement Project
Project Location and Vicinity Map

Author: msimmons
Version Date: 3/25/2014



Figure 2
Peck Water Conservation
Improvement Project
Project Site Map



SECTION 2.0 – PROPOSED PROJECT

The Project will involve constructing a pump station located on the northeastern shore of the spreading basin, constructing a pipeline that connects to a new outlet structure into the San Gabriel River, and removing accumulated sediment from the spreading basin (Figure 1).

2.1 CONSTRUCTION METHOD

The construction methods for the three components of the Project are described below.

2.1.1 Pump Station

The Project will involve construction of a 784-square-foot pump station on the eastern shore of Peck Road Spreading Basin to transfer water to the San Gabriel River. The pump station will house two 225-horsepower electric motor pumps, electrical equipment, and connection to the intake structure. The pump station will be connected to an existing electrical service, and an enclosed power transformer will be constructed adjacent to the pump station.

2.1.2 Pipeline

Pumped water from the basin will be conveyed to the San Gabriel River by an approximately 7,000-foot-long pipeline connecting the two water bodies. The pipeline will be placed at a depth approximately 4 to 10 feet underground. Construction of the pipeline would involve a construction area that would extend the length of the proposed pipeline alignment. The westernmost segment of the pipeline alignment will traverse the parking area of an industrial building and cross Peck Road. The pipeline alignment will then traverse Clark Street. The remainder of the pipeline alignment will traverse undeveloped land south of the gravel mining pit located east of the spreading basin within the City of Irwindale. The eastern terminus of the pipeline to the San Gabriel River will include an outlet structure. The pipeline will be constructed in segments to limit the length and duration of any lane closures along Clark Street.

2.1.3 Sediment Removal

The Project would involve the excavation and removal of up to an estimated 110,000 cubic yards (cy) of sediment to restore basin capacity, improve water flows, and allow for the transport of water to the soft-bottom San Gabriel River. The spreading basin near the outlet of Santa Anita Wash would be excavated to an elevation of 290 feet to achieve a capacity of 3,290 acre-feet. Approximately 1 to 22 feet of sediment would be removed from an area of about 7.85 acres. In order to provide a conservative analysis, this Project assumes that sediment removal would include draining the spreading basin to approximately 280 feet and removing vegetation in the excavation area.

Construction staging for sediment excavation would be located on approximately 1.5 acres of land along the western bank of the spreading basin immediately north of the Santa Anita Wash outlet in the City of Monrovia. This area is located immediately adjacent to the excavation area within the spreading basin. Access to the construction staging area would be provided by a gated access road that connects to Peck Road. The gated access road begins adjacent to the northeastern corner of the spreading basin and travels along the northern and western shores of the basin before terminating at the staging area. Where necessary, temporary access roads would be created from the existing access road into the basin.

It is estimated that removal of excavated sediment from the Project site would be accomplished by transporting a maximum of approximately 200 truck trips per day over 60 working days. It is likely that fewer truck trips per day and/or for the overall total will be required. Excavated sediment will be hauled away from the Project site to one of the following sediment disposal sites: Peck Road Gravel Pit, Manning Pit Sediment Placement Site (SPS), or Azusa Land Reclamation. These sites are located in the Cities of Irwindale and Azusa, less than 1 to 7 miles east of the spreading basin. Most of the sediment will be hauled to the closest sediment disposal site, Peck Road Gravel Pit, located less than 1 mile east of the spreading basin.

The water level in the basin can vary between elevations of 280 to 315 feet. After the removal of the sediment, the water level in the spreading basin will be maintained at an elevation of approximately 290 feet.

Maintenance for the Project would require periodic sediment removal from the Santa Anita Wash outlet. Maintenance of the spreading basin would occur in the excavation area identified in Figure 2. Up to 2,000 cy of accumulated sediment may need to be removed per year. It is anticipated that the hauling of sediment during maintenance activities would have an approximate duration of two weeks and require approximately 25 truck trips/day. Excavated sediment during maintenance activities would be hauled to one of the three aforementioned sediment disposal sites.

SECTION 3.0 – JURISDICTIONAL CRITERIA

3.1 FEDERAL JURISDICTION

3.1.1 United States Army Corps of Engineers

Pursuant to Section 404 of the CWA, the United States Army Corps of Engineers (USACE) regulates the discharge of dredged and/or fill material into waters of the United States. The term “waters of the United States” is defined by 33 Code of Federal Regulations (CFR) Part 328 and currently includes: (1) all navigable waters (including all waters subject to the ebb and flow of the tide), (2) all interstate waters and wetlands, (3) all other waters (e.g., lakes, rivers, intermittent streams) that could affect interstate or foreign commerce, (4) all impoundments of waters mentioned above, (5) all tributaries to waters mentioned above, (6) the territorial seas, and (7) all wetlands adjacent to waters mentioned above. Waters of the United States do not include (1) waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act (CWA), and (2) prior converted cropland. Waters of the United States typically are separated into two types: (1) wetlands and (2) “other waters” (non-wetlands) of the United States.

Wetlands are defined by 33 CFR 328.3(b) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support ... a prevalence of vegetation typically adapted for life in saturated soil conditions.” In 1987, USACE published a manual (1987 Wetland Manual) to guide its field personnel in determining jurisdictional wetland boundaries. This manual was amended in 2008 to the USACE 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (2008 Arid West Supplement). Currently, the 1987 Wetland Manual and the 2008 Arid West Supplement provide the legally accepted methodology for identification and delineation of USACE-jurisdictional wetlands in southern California.

In the absence of wetlands, the limits of USACE jurisdiction in nontidal waters, including intermittent Relatively Permanent Water (RPW) streams, extend to the Ordinary High Water Mark (OHWM), which is defined by 33 CFR 328.3(e) as:

... that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

On January 9, 2001, the U.S. Supreme Court ruled (in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*) (SWANCC) that USACE jurisdiction does not extend to previously regulated isolated waters, including but not limited to isolated ponds, reservoirs, and wetlands. Examples of isolated waters that are affected by this ruling include vernal pools, stock ponds, lakes (without outlets), playa lakes, and desert washes that are not tributary to navigable or interstate waters or to other jurisdictional waters.

A joint guidance by EPA and USACE was issued on June 5, 2007, to clarify circumstances where a CWA Section 404 permit would be required before conducting activities in wetlands, tributaries, and other waters. This guidance is consistent with the Supreme Court’s decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208 [2006]) (*Rapanos*), which address the jurisdiction over waters of the United States under the CWA (33 U.S.C. §1251 et seq.). This guidance was

revised on December 2, 2008, based on consideration of public comments on the 2007 guidance and the agencies' experience in implementing the *Rapanos* decision. A draft guidance was circulated in April 2011 to supersede both the 2003 SWANCC guidance and 2008 *Rapanos* decision; however, this guidance is not finalized and lacks the force of law.

USACE will continue to assert jurisdiction over Traditionally Navigable Waters (TNWs), wetlands adjacent to TNW, non-navigable tributaries of TNW that are Relatively Permanent Waters (RPW) where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months), and wetlands that directly abut such tributaries.

USACE generally will not assert jurisdiction over swales or erosional features (e.g., gullies or small washes characterized by low volume, infrequent, or short duration flow) or nontidal drainage ditches (including roadside ditches) that are (1) excavated wholly in and draining only uplands and (2) that do not carry a relatively permanent flow of water. USACE defines a drainage ditch as:

A linear excavation or depression constructed for the purpose of conveying surface runoff or groundwater from one area to another. An "upland drainage ditch" is a drainage ditch constructed entirely in uplands (i.e., not in waters of the United States) and is not a water of the United States, unless it becomes tidal or otherwise extends the ordinary high water line of existing waters of the United States.

Furthermore, USACE generally does not consider "[a]rtificially irrigated areas which would revert to upland if the irrigation ceased" to be subject to their jurisdiction. Such irrigation ditches are linear excavations constructed for the purpose of conveying agricultural water from the adjacent fields. Therefore, such agricultural ditches are not considered to be subject to USACE jurisdiction.

USACE will use fact-specific analysis to determine whether waters have a significant nexus with (1) TNW for nonnavigable tributaries that are not relatively permanent (non-RPW); (2) wetlands adjacent to nonnavigable tributaries that are not relatively permanent; and (3) wetlands adjacent to, but that do not directly abut, a relatively permanent nonnavigable tributary. According to USACE, *"a significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters,"* including consideration of hydrologic and ecologic factors. A primary component of this determination lies in establishing the connectivity or lack of connectivity of the subject drainages to a TNW.

In May 2007, USACE and EPA jointly published and authorized the use of the *Jurisdictional Determination Form Instructional Guidebook* (USACE 2007). The form and guidebook define how to determine if an area is USACE jurisdictional and if a significant nexus exists per the *Rapanos* decision. A nexus must have more than insubstantial and speculative effects on the downstream TNW to be considered a significant nexus. This guidebook is updated by the 2008 Arid West Supplement and the 2010 *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*.

3.2 STATE JURISDICTION

The State of California (State) regulates discharge of material into waters of the State pursuant to Section 401 of the CWA as well as the California Porter-Cologne Water Quality Control Act (Porter-

Cologne; California Water Code, Division 7, §13000 et seq.). Waters of the State are defined by Porter-Cologne as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code Section 13050(e)). Waters of the State broadly includes all waters within the State’s boundaries (public or private), including waters in both natural and artificial channels.

3.2.1 Regional Water Quality Control Board

Under Porter-Cologne, the State Water Resources Control Board (SWRCB) and the local Regional Water Quality Control Boards (RWQCB) regulate the discharge of waste into waters of the State. Discharges of waste include “fill, any material resulting from human activity, or any other ‘discharge’ that may directly or indirectly impact ‘waters of the state.’” Porter-Cologne reserves the right for the State to regulate activities that could affect the quantity and/or quality of surface and/or groundwaters, including isolated wetlands, within the State. Wetlands were defined as waters of the State if they demonstrated both wetland hydrology and hydric soils. Waters of the State determined to be jurisdictional for these purposes require, if impacted, waste discharge requirements (WDRs).

When an activity results in fill or discharge directly below the OHWM of jurisdictional waters of the United States (federal jurisdiction), including wetlands, a CWA Section 401 Water Quality Certification is required. If a proposed project is not subject to CWA Section 401 certification but involves activities that may result in a discharge to waters of the State, the project may still be regulated under Porter-Cologne and may be subject to WDRs. In cases where waters apply to both CWA and Porter-Cologne, RWQCB may consolidate permitting requirements to one permit.

3.2.2 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the California Fish and Game Code, the California Department of Fish and Wildlife (CDFW) regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFW defines a “stream” (including creeks and rivers) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation” (California Code of Regulations, Title 14, Section 1.72). The jurisdiction of CDFW may include areas in or near intermittent streams, ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams that are indicated on USGS maps, watercourses that may contain subsurface flows, or within the flood plain of a water body. CDFW’s definition of “lake” includes “natural lakes or man-made reservoirs.” CDFW limits of jurisdiction typically include the maximum extents of the uppermost bank-to-bank distance and/or the outermost extent of riparian vegetation dripline, whichever measurement is greater.

In a CDFW guidance of stream processes and forms in dryland watersheds, streams are identified as having one or more channels that may all be active or receive water only during some high flow event. Subordinate features, such as low flow channels, active channels, banks associated with secondary channels, floodplains, and stream-associated vegetation, may occur within the bounds of a single, larger channel. The water course is defined by the topography or elevations of land that confine a stream to a definite course when its waters rise to their highest level. A watercourse is defined as a stream with boundaries defined by the maximal extent or expression on the landscape even though flow may otherwise be intermittent or ephemeral.

Artificial waterways such as ditches (including roadside ditches), canals, aqueducts, irrigation ditches, and other artificially created water conveyance systems also may be under the jurisdiction of CDFW. CDFW may claim jurisdiction over these features based on the presence of habitat characteristics suitable to support aquatic life, riparian vegetation, and/or stream-dependent terrestrial wildlife. As with natural waterways, the limit of CDFW jurisdiction of artificial waterways includes the uppermost bank-to-bank distance and/or the outermost extent of riparian vegetation dripline, whichever measurement is greater.

CDFW does not have jurisdiction over wetlands but has jurisdiction to protect against a net loss of wetlands. CDFW supports the wetland criteria recognized by USFWS. The following is the USFWS-accepted definition of a wetland:

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports hydrophytes, (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year (Cowardin et al. 1979).

When considering whether an action would result in a net loss of wetlands, CDFW will extend jurisdiction to one-parameter wetland conditions where such conditions exist within the riparian vegetation that is associated with a stream or lake and does not depend on whether those features meet the three-parameter USACE methodology of wetland determination. If impacts to CDFW jurisdiction are unavoidable, a mitigation plan will be implemented in coordination with CDFW and consistent with the policy of “no net loss” of wetland habitat.

SECTION 4.0 – METHODS

4.1 LITERATURE REVIEW

Prior to the field delineation, high-resolution aerial photographs, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps (USFWS 2014), USGS National Hydrography Dataset, United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2014a) were referenced for soil types found within the footprint area, and aerial images (Google 2013) images were examined to determine the potential areas of USACE, RWQCB, and CDFW jurisdiction in the Project site. Topographic maps and aerial photographs were used to identify drainage patterns and potential washes through the Project site. The NWI map was used to identify any existing delineated wetlands in the vicinity of the Project site.

4.2 FIELD SURVEY

Features within the Project site were investigated for the presence of drainages, including culverts, corrugated metal pipe (CMP) drains, reinforced concrete pipes (RCP), V-ditches, water bodies, riparian habitats, potential wetlands, and hydrological connectivity. Surveys were conducted by foot throughout the Project site. The delineators recorded notes and photographs of existing conditions, and dug soil pits as part of the soil investigation.

Potential wetland areas were evaluated based upon the presence of three parameters: hydrophytic vegetation, hydric soils, and wetland hydrology in accordance with USACE jurisdiction wetland identification requirements (USACE 1987; USACE 2008).

4.2.1 Vegetation

Vegetation communities were mapped in accordance with the standards in *A manual of California vegetation, 2nd edition* (Sawyer et al. 2009). Plant species follow *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012). Plants within drainage (stream) features were categorized according to their probabilities to occur in wetlands versus non-wetlands in accordance with the categories in the *National List of Species that Occur in Wetlands* (Lichvar 2013). Wetland communities were mapped in accordance with the USFWS NWI nomenclature and can include different riparian vegetation communities with defined wetland characteristics.

Wetland Plants

The 2013 National Wetland Plant List (Lichvar 2013), and the National Wetland Plant List Indicator Rating Definitions (Lichvar 2013) were referenced. The wetland species categories are:

- I. **OBL (Obligate Wetland Plants)**—Almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface.

These plants are of four types:

- Submerged (plants that conduct virtually all of their growth and reproductive activity under water)

- Floating (plants that most often grow with the leaves and other vegetative and reproductive organs floating on the water surface)
 - Floating-leaved (plants that are rooted in sediment but also have leaves that float on the water surface)
 - Emergent (herbaceous and woody plants that grow with their bases submerged and rooted in inundated sediment or seasonally saturated soil and their upper portions, including most of the vegetative and reproductive organs, growing above the water level)
- II. **FACW** (Facultative Wetland Plants)—Usually occur in wetlands, but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.
- III. **FAC** (Facultative Plants)—Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.
- IV. **FACU** (Facultative Upland Plants)—Usually occur in non-wetlands, but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.
- V. **UPL** (Upland Plants)—Almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

Plant species and absolute percent covers were recorded by stratum (i.e., tree, sapling/shrub, herb, woody vine) and evaluated for dominance and prevalence according to guidelines in the 1987 Wetland Manual and Arid West Supplement. Naming conventions follow the Jepson Manual (Hickman 1993).

4.2.2 Hydrology

Climate and flow frequency was considered when observing watermarks and drift lines. For the purpose of determining hydrologic connectivity to a TNW, aerial images (Google 2013), NWI maps (USFWS 2014), and USGS quadrangle (USGS 2014) were referenced, and all features were inspected in the field on and offsite for true connectivity.

Typical hydrologic indicators per the 1987 Wetland Manual and Arid West Supplement guidelines were recorded when observed. Indicators include evidence of inundation, destruction of vegetation, saturation, surface water, watermarks, drift lines, sediment deposits, water-stained leaves, and the presence or oxidation/reduction features in the soil. Climate and flow frequency was considered when observing watermarks and drift lines.

4.2.3 Soils

As prescribed by the 1987 Wetland Manual and Arid West, all available lists of hydric soils were referenced to identify any occurrence of hydric soils listed within the Project. The national list of hydric soils (USDA 2014a) was used along with local soil survey maps. In addition, USDA NRCS Web Soil Survey (USDA 2014b) was referenced for soil types found within the Project footprint area.

Soil pits were dug in representative delineated features on the Project, and soils were evaluated according to guidelines in the 1987 Wetland Manual and Arid West Supplement. Soil layers were examined for the presence or absence of hydric soil indicators and oxidation/reduction features indicative of historic saturated soil conditions. In addition, soil pits were dug in representative delineated features in areas that had the most potential to exhibit hydric characteristics. Soil layers were examined for the presence or absence of hydric soil indicators and oxidation/reduction features indicative of historic saturated soil conditions.

SECTION 5.0 – RESULTS

Chambers Group delineators Paul Morrissey, Jahan Khalili, and Heather Franklin performed field investigations between March 3 through 5, 2014 to delineate potential waters onsite, including wetlands. The results of the field delineation are presented below. Figure 2 provides the location of water features delineated within the Project. Site photographs are included in Appendix A.

5.1 SURVEY CONDITIONS

Conditions for southern California for years 2012 and 2013 were dry. For 2014, southern California is facing the worst drought in history, and the State of California Governor Jerry Brown declared a state of emergency. Water levels in all but a few reservoirs in the state of California are less than 50 percent of total capacity (NOAA 2014) and there is a high fire risk. The state of drought in southern California was taken into account during the delineation survey effort. Areas typically under water were surveyed with the understanding that the recruitment of vegetation was evident there due to the low level of water in the basin; and therefore should not be considered a typical condition.

The Santa Anita Wash outlet is heavily used by local residents hiking through the area, fisherman, and homeless/transients. Many areas within the Black Willow Thicket were cleared of vegetation by transients for homeless encampments and were heavily disturbed with litter and debris.

During the weekend of July 19 to 21, 2013, a five-acre fire burned approximately 80 percent of the habitat within the Santa Anita Wash area. Small patches of vegetation remained along the water edge and within the western corner near the golf course. The fire destroyed much of the understory vegetation including immature trees, shrubs, and annual vegetation. The mature stands of trees within the Black Willow Thicket community did suffer extensive damage; however, emergent willows were observed at the base/crown of the trees indicating the fire did not completely destroy all trees in the area.

5.2 HYDROLOGY AND HYDROLOGIC CONNECTIVITY

The spreading basin is fed by uncontrolled storm flows from two main channels (Santa Anita Wash and Sawpit Wash) on the north side of the basin. Water within the spreading basin exits through a concrete spillway on the southwest end of the basin. Flows travel southwestwardly through the Rio Hondo Channel and connect with the Los Angeles River approximately 11 miles downstream, eventually terminating into the Pacific Ocean approximately 13 miles downstream from the convergence with the Rio Hondo.

The water level in the basin can vary between elevations of 280 to 315 feet. After the removal of the sediment, the water level in the spreading basin will be maintained at an elevation of approximately 290 feet.

The proposed pipeline would transport water to the San Gabriel River, which has much greater percolation rates and also percolates into the Main San Gabriel Groundwater Basin. From the entrance of the pipeline at the San Gabriel River, the flows travel southwestwardly through the San Gabriel River Channel and connect with Walnut Creek approximately 2.6 miles downstream, and continue south approximately 25 miles eventually terminating in the Pacific Ocean. Based on the designs, only the newly constructed outlet structure would be exposed to the San Gabriel River.

5.3 VEGETATION COMMUNITIES

Chambers Group biologists Corey Vane and Heather Clayton conducted the biological resource survey on March 22 and 23, 2013. Vegetation communities were mapped during this effort using vegetation descriptions set forth in *A Manual of California Vegetation, Second Edition* by John Sawyer and Todd Keeler-Wolf. The Project site is comprised of six vegetation communities including Disturbed/Developed, California sagebrush-California Buckwheat Scrub, Disturbed Mule Fat Thicket, Open Water, Black Willow Thicket and Escaped Ornamental Vegetation. Two areas were identified with wetland habitat during the survey (see Section 5.5). Work Area 1 is located at the inlet of Santa Anita Wash, and Work Area 2 located at the pipe alignment and pump station and intake structure along the east bank of the basin. These Work Areas are comprised of the vegetation communities described below.

Disturbed/Developed

Developed areas are areas that have been altered by humans and now display man-made structures such as houses, paved roads, buildings, parks, and other maintained areas. Disturbed areas are mostly devoid of vegetation due to recent disturbances. The small amount of vegetation that begins to reclaim the soil is dominated by nonnative, weedy species adapted to frequent disturbance. Species found on the spreading basin site typical of this community include: flax-leaved horseweed (*Erigeron bonariensis*), horseweed, western marsh cudweed (*Gnaphalium palustre*), telegraph weed (*Heterotheca grandiflora*), prickly lettuce (*Lactuca serriola*), cheeseweed (*Malva parviflora*), everlasting cudweed (*Pseudognaphalium luteoalbum*), and common groundsel (*Senecio vulgaris*). Areas within the Project site include the upper slopes of the basin and areas cleared by transients. Disturbed/Developed areas make up 2.24 acres within Work Area 1, and 1.55 acres in Work Area 2.

California Sagebrush – California Buckwheat Scrub (*Artemisia californica* – *Eriogonum fasciculatum* Shrubland Alliance)

California Sagebrush – California Buckwheat Scrub is characterized by low, soft-woody shrubs up to 1 meter (3.3 feet) in height. Species typical of this community are drought-deciduous and dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*) with laurel sumac (*Malosma laurina*) and white sage (*Salvia apiana*). California Sagebrush – California Buckwheat Scrub can be found on steep, xeric slopes or clay-rich soils that are slow to release water. California Sagebrush – California Buckwheat Scrub is located in small patches on the Project site. Plants species observed that are typical of this community include California sagebrush and California buckwheat. The Project site has 0.05 acre of California Sagebrush – California Buckwheat Scrub located above the east bank of the Santa Anita Wash outlet near Work Area 1 and the Staging Area.

Disturbed Mule Fat Thicket

Mule Fat Thicket consists of dense stands of mule fat with lesser amounts of willow species. This community usually occupies intermittent streambeds, seeps, and the toe of landslides where seeps develop (Gray and Bramlet 1992). Disturbed Mule Fat Thicket has a large percentage of non-natives found within this community. Species found on the site typical of this vegetation community include: mule fat, tree tobacco, and narrow-leaf willow. Disturbed Mule Fat Thicket makes up the majority of the channel within the San Gabriel River outlet area. There is approximately 0.08 acre of Disturbed Mule Fat Thicket within the San Gabriel River area.

Open Water

Open Water often contains a number of phytoplankton species and filamentous blue-green and green algae. In shallow water, vascular species including horned pondweed (*Zannichellia palustris*), duckweed fern (*Azolla filiculoides*), and duckweed (*Lemna* sp.) may be found floating on the water surface. Open Water makes up approximately 3.14 acres in Work Area 1.

Black Willow Thicket

Black Willow Thicket is dominated by black willow (*S. gooddingii*) and interspersed willow species (*Salix* spp.) and saplings of riparian forest. Common willow species of this community may include: arroyo willow (*Salix lasiolepis*) and narrow-leaf willow (*S. exigua*) with lesser amounts of mule fat (*Baccharis salicifolia* subsp. *salicifolia*).

A large area on the northeastern corner of the spreading basin site has been mapped as Black Willow Thicket, with lesser amounts of Black Willow Thicket scattered along the periphery of the area. Plant species found on the spreading basin site typical of this vegetation community include: black willow, narrow-leaf willow, mule fat, red willow (*Salix laevigata*), California cottonweed (*Epilobium ciliatum*), velvet ash (*Fraxinus velutina*), and western sycamore (*Platanus racemosa*). Work Areas identified as Freshwater Emergent Wetland and Freshwater Forest/shrub Wetland were identified within the Black Willow Thicket community (these wetland communities are USFWS NWI recognized communities comprised of riparian communities). However, during the biological surveys conducted by Chambers Group in March 2013, this area was identified as open water. Therefore, these Work Areas should not be considered a typical condition.

The Project site has a total of 3.71 acres of Black Willow Thicket within Work Area 1 and 2. A total of 3.18 acres of wetland habitat is comprised of Black Willow Thicket within Work Area 1 and 2. Of this 3.18 acres, approximately 2.89 acre of Freshwater Forest/shrub Wetland and 0.25 acre Freshwater Emergent Wetland comprised of Black Willow Thicket were identified within Work Area 1; and 0.04 acre Freshwater Forest/shrub Wetland comprised of Black Willow Thicket were identified within Work Area 2. Approximately 0.53 acre of Black Willow Thicket within Work Area 1 is not considered wetland.

Escaped Ornamental Vegetation

Escaped Ornamental Vegetation consists of areas where the vegetation is dominated by non-native horticultural plants used for landscaping that were not originally planted but may have been located nearby and have escaped to colonize the spreading basin site (Chambers Group 2013a) or exotic

vegetation spreading/colonizing in the area. Typically, the species composition consists of introduced trees, shrubs, flowers, and turf grass.

Large patches of exotic vegetation have been mapped throughout the spreading basin site. Smaller patches of scattered castor bean (*Ricinus communis*), exotic palm saplings, short-pod mustard, passion fruit, and giant reed (*Arundo donax*) were also present within the Black Willow Thicket community and have not been mapped (primarily isolated individuals). Plant species found on the spreading basin site within this community include: crimson bottlebrush tree (*Callistemon citrinus*), deodar cedar tree (*Cedrus deodara*), carrotwood tree (*Cupaniopsis anacardioides*), blue gum tree (*Eucalyptus globules*), Chinese flame tree (*Koelreuteria bipinnata*), white mulberry tree (*Morus alba*), allepo pine (*Pinus halepensis*), castor bean, Peruvian pepper tree (*Schinus molle*), and Mediterranean tamarisk (*Tamarix ramosissima*).

5.4 SOILS

The soils in the Project are located in Los Angeles County, California, Southeastern Part (CA696). However, no data was available in the NRCS Web Soil Survey (USDA 2014a) for the Project site. Substrates and soils identified within the Project site include gravel, sand, silts, sandy clay loam, silty clay loam, and clay loam type soils.

5.5 WETLANDS

The wetland areas identified during the survey are consistent with the NWI-mapped Freshwater Forested/Shrub Wetland along the banks of the basin and at the Santa Anita Wash and Sawpit Wash outlets and Freshwater Emergent Wetland within the Work Area 1. Positive indicators for all three wetland parameters (hydrophytic vegetation, hydric soils and wetland hydrology) were present within the Project site and surrounding area within the basin area. Two main wetland areas were identified in the Project site: Work Area 1 located at the inlet of Santa Anita Wash, and Work Area 2 located at the pipe alignment and pump station and intake structure along the east bank of the basin. Work Area 1 is the main Work Area within the excavation area and Work Area 2 is a thin strip of wetland with scattered vegetation along the eastern banks of the basin. Other Work Areas exist within the basin including the Sawpit Wash outlet area and the perimeter of the basin; however, these areas were not surveyed because they were not located within the Project impact area. The outlet structure located within the San Gabriel River is not a wetland area. These wetland areas developed from a build-up of sediment and are located entirely within the Los Angeles County owned flood control basin.

Vegetation was not present throughout the entirety of the wetland due to homeless encampments, trails, and fire damage. Vegetation was dominated by *Salix gooddingii* (black willow; FACW), *Salix laevigata* (red willow; FACW), and *Baccharis salicifolia* (mule fat, FAC), with lesser amounts of *Cyperus* sp. (umbrella sedge, FACW) and *Xanthium strumarium* (cocklebur, FAC). Young and emergent willows were sprouting from the base/crown of mature willows; however, much of the understory within the Black Willow Thicket, Freshwater Emergent Wetland and Freshwater Forested Shrub Wetland habitat was destroyed by the fire and clearing from homeless encampments.

Unvegetated areas likely resulted from human disturbances and the drought conditions. These areas are depicted as Disturbed/developed communities within the excavation area (Figure 3). The vegetation parameter throughout much of the wetland can be considered disturbed because of the ongoing

changes in the environment mentioned above. Fire recovery is estimated to take several years within higher rain fall years to restore this wetland to higher quality conditions.

The wetland within the Project site receives hydrology from the Santa Anita Wash channel, local stormwater runoff, and direct precipitation. The water level observed in the basin was below the water levels in 2013. Evidence of hydrology included saturation, surface soil cracks, inundation visible on aerial imagery, drift deposits, salt crust, hydrogen sulfide odor and aquatic invertebrates as the primary indicators. Drainage patterns were observed as a secondary indicator of hydrology. Although not an indicator of hydrology, it was noted that fish and pond turtle remains were observed within the Project site near Soil Pit 1.

Eleven formal soil pits were investigated throughout the Project site (Figure 3). Prominent and distinct redoxomorphic features were observed in many of the wetland soil pits, and many met the conditions of the F6 – Redox Dark Surface indicator for hydric soils. Many of the soil pits explored revealed a multi-layer soil profile of clay, silt, loam, and sand textured soils. Matrix soil colors were varied and consisted of Gley, 2.5Y, 7.5 YR, and 10 YR with values ranging from 2 to 3, and chromas primarily between 2 and 1 (GretagMacbeth 2009). Soil data collected during the delineation can be found in the Wetland Determination Data Forms – Arid West Region presented in Appendix B. The descriptions of soil, vegetation and hydrology for each soil pit area are presented below.

Soil Pit 1

Soil Pit 1 (SP-1) was established in a wetland (wetland hydrology, soils, and vegetation present) near the southeast area of the Project site in Work Area 1. SP-1 revealed a three-layer soil profile: A) 0 to 2 inch layer: sandy-clay loam soil with distinct 10 percent redoximorphic (redox; oxidation/reduction) features with a chroma/value of 5YR 4/6; B) 3 to 10 inch layer: sandy-clay loam with distinct 15 percent redox features with a chroma/value of 2.5YR 3/6; and C) 11 to 18 inch layer of sand. The upper 10 inches of soils of SP-1 meet the F6 – Redox Dark Surface indicators of hydric soils (USDA 2003).

The habitat surrounding SP-1 is Freshwater Forested/Shrub Wetland comprised of Black Willow Thicket to the west and southwest, and open water to the east and northeast. Hydrophytic vegetation within this wetland included *Salix laevigata* (red willow; FACW) and *Salix gooddingii* (black willow; FACW). No fire damage was evident here; however, debris and homeless camps are prevalent in the area. Exotic vegetation included non-native grasses (*Bromus* sp.), castor bean (*Ricinus communis*), tree tobacco (*Nicotiana glauca*), sand pepper grass (*Lepidium lasiocarpum* subsp. *Lasiocarpum*) and shortpod mustard (*Hirschfeldia incana*).

Based on aerial images (Google 2013), this area is typically under water. Santa Anita Wash enters the basin to the north of SP-1 (Photo Area 2). Hydrological indicators included water marks (non-riverine), sediment deposits (non-riverine), water stained leaves, and biotic crust. The wetland boundary was established by the waterline to the east and north, and the sandy substrate deposited by the Santa Anita Wash to the north.

Soil Pit 2

Soil Pit 2 (SP-2) was established in Work Area 1 near the southeast area of the Project site. SP-2 revealed a three-layer soil profile: A) 0 to 0.5 inch layer: ash; B) 1 to 8 inch layer: sandy-clay loam soil

with distinct 10 percent redox features with a chroma/value of 5YR 4/6; and C) 9 to 18 inch layer of sand. The upper 1 to 8 inches of soil of SP-2 meet the F6 – Redox Dark Surface indicators of hydric soils.

The habitat surrounding SP-2 is Freshwater Forested/Shrub Wetland comprised of Black Willow Thicket. Hydrophytic vegetation within this wetland included emergent *Salix laevigata* (FACW) and mature *Salix gooddingii* (FACW). Understory shrubs and emergent vegetation were scarce due to fire damage (see Section 5.1). However, the trees showed signs of life with emergent willow sprouting from the base of the trees (Photo Area 3). Exotic vegetation included non-native wild cucumber (*Marah macrocarpa*).

Hydrological indicators include faint soil surface cracks, due to the layer of ash present on the soils (Photo Area 4). The Santa Anita Wash is located to the north of SP-2.

Soil Pit 3

Soil Pit 3 (SP-3) was established in Work Area 1 near the center of the Project site. SP-3 revealed a single-layer soil profile: A) 0 to 18 inch layer: sandy-clay loam soil with distinct 15 percent redox features with a chroma/value of 2.5YR 3/6. The soils of SP-3 meet the F6 – Redox Dark Surface indicators of hydric soils.

The habitat surrounding SP-3 is Freshwater Forested/Shrub Wetland comprised of Black Willow Thicket with the Santa Anita Wash to the north. Hydrophytic vegetation within this wetland area included emergent and mature *Salix gooddingii* (FACW), *Baccharis salicifolia* (mule fat, FAC), *Cyperus* sp. (umbrella sedge, FACW), and *Xanthium strumarium* (cocklebur, FAC) vegetation. Understory shrubs and emergent vegetation were scarce due to fire damage. However, the trees showed signs of life with emergent willow sprouting from the base of the trees (Photo Area 5). Exotic vegetation included non-native grasses, eupatory (*Ageratina adenophora*), castor bean, sand pepper grass and shortpod mustard.

Hydrological indicators include sediment deposits, soil surface cracks, and a distinct drainage pattern in wetlands. Based on aerial imagery (Google 2013), this area is typically inundated with water and likely exhibited an herbaceous shrub/emergent wetland with forested shrub wetland along the banks.

Soil Pit 4

Soil Pit 4 (SP-4) was established in Work Area 1 near the southwestern area of the Project site. SP-4 revealed a two-layer soil profile: A) 0 to 12 inch layer: sandy-clay loam soil with distinct 10 percent redox features with a chroma/value of 5YR 4/6; and B) 13 to 18 inches: sand. The soils in the upper soil profile of SP-4 meet the F6 – Redox Dark Surface indicators of hydric soils.

The habitat surrounding SP-4 is Freshwater Forested/Shrub Wetland comprised of Black Willow Thicket with noticeable disturbance from the fires and homeless camps. Hydrophytic vegetation within this wetland area included emergent and mature *Salix gooddingii* (FACW), *Baccharis salicifolia* (FAC), and *Rosa californica* (California rose, FAC) vegetation. Understory shrubs and emergent vegetation were scarce due to fire damage. However, the trees showed signs of life with emergent willow sprouting from the base of the trees (Photo Area 6). Exotic vegetation included shortpod mustard, castor bean, and non-native grasses.

Hydrological indicators include faint soil surface cracks (layer of ash on ground), and drainage pattern in wetlands.

Soil Pit 5

Soil Pit 5 (SP-5) was established in Work Area 1 near the southern area of the Project site. SP-5 revealed a four-layer soil profile: A) 0 to 2 inch layer: sandy-clay loam soil with distinct 10 percent redox features with a chroma/value of 5YR 4/6; B) 3 to 5 inch layer of sand; C) 6 to 12 inch layer: sandy-clay loam soil with distinct 10 percent redox features with a chroma/value of 5YR 4/6; and D) 13 to 18 inch layer of sand. The sandy-clay loam soils of SP-5 meet the F6 – Redox Dark Surface indicators of hydric soils.

The habitat surrounding SP-5 is Freshwater Forested/Shrub Wetland comprised of Black Willow Thicket with open water to the south and east. Hydrophytic vegetation within this wetland area included emergent and mature *Salix gooddingii* (FACW), *Baccharis salicifolia* (FAC), and *Xanthium strumarium* (FAC) vegetation. Understory shrubs and emergent vegetation were scarce due to fire damage. However, the trees showed signs of life with emergent willow sprouting from the base of the trees.

Hydrological indicators included drainage pattern in wetlands. Although this is only a secondary hydrological indicator (2 secondary indicators needed to fulfill hydrology for wetlands), this area is heavily disturbed by homeless, trails, and the recent fire (ash covering much of the ground (see Soil Pit 5 Photo in Appendix A).

Soil Pit 6

Soil Pit 6 (SP-6) was established in Work Area 1 outside the southeastern boundary of the Project site. SP-6 revealed a three-layer soil profile: A) 0 to 2 inch layer: Gley 1 2.5/N soil - clay loam soil with 2 percent redox features with a chroma/value of 5YR 4/6; B) 3 to 8 inch layer: silty clay loam soil with 10 percent redox features with a chroma/value of 5YR 4/6; and C) 9 to 18 inch layer of sand. The soils of SP-6 meet the F6 – Redox Dark Surface indicators of hydric soils.

The habitat surrounding SP-6 is Freshwater Emergent Wetland with open water to the north and south. Based on aerial images (Google 2013) and surveys conducted by Chambers Group in 2013, this area between the Santa Anita Wash and the Peck Road Park is typically under water. Hydrophytic vegetation within this wetland area included emergent and mature *Salix gooddingii* (FACW), *Baccharis salicifolia* (FAC), and *Xanthium strumarium* (FAC). Exotic vegetation included tree tobacco, sand peppergrass, and non-native grasses.

Hydrological indicators include drainage pattern surface water, water-stained leaves, biotic crust, aquatic invertebrates, and hydrogen sulfide odor.

Soil Pit 7

Soil Pit 7 (SP-7) was established in Work Area 1 near the northern boundary of the Project site. SP-7 revealed a single-layer soil profile: A) 0 to 18 inch layer: sandy-clay loam soil with distinct 40 percent redox features with a chroma/value of 5YR 4/6. The soils of SP-7 meet the F6 – Redox Dark Surface indicators of hydric soils.

The habitat surrounding SP-7 is Freshwater Forested/Shrub Wetland comprised of Black Willow Thicket to the north, south, and west, and open water to the east. Hydrophytic vegetation within this wetland area included emergent and mature *Salix gooddingii* (FACW), *Populus fremontii* (Freemont cottonwood,

N/A), *Baccharis salicifolia* (FAC), and *Xanthium strumarium* (FAC) vegetation. Exotic vegetation included castor bean, tree tobacco, non-native grasses and shortpod mustard.

Hydrological indicators include sediment deposits, watermarks, water stained leaves, drainage pattern in wetlands. The boundary of the wetland was confirmed by a lack of vegetation and presence of sand bars to the south and open water to the east. Based on aerial imagery (Google 2013), this area is typically inundated with water.

Soil Pit 8

Soil Pit 8 (SP-8) was established in Work Area 1 near the northwest area of the Project site. SP-8 revealed a two-layer soil profile: A) 0 to 0.5 inch layer of ash; B) 1 to 18 inch layer: sandy-clay loam soil with distinct 10 percent redox features with a chroma/value of 5YR 4/6. The soils of SP-8 meet the F6 – Redox Dark Surface indicators of hydric soils.

The habitat surrounding SP-8 is Freshwater Forested/Shrub Wetland comprised of Black Willow Thicket to the north, south and east. Hydrophytic vegetation within this wetland included emergent mature *Salix gooddingii* (FACW), and *Baccharis salicifolia* (FAC), *Sambucus nigra* subsp. *caerulea* (blue elderberry, FAC). Understory shrubs and emergent vegetation were scarce due to fire damage. However, the trees showed signs of life with emergent willow sprouting from the base of the trees (Photo Area 8). Exotic vegetation included castor bean and shortpod mustard.

Hydrological indicators include distinct drainage patterns in wetlands and salt crust. This area is likely connected hydrologically to the area in SP-3 during wetter years. Deep bank to bank formations are evident, but the lack of vegetation (destroyed from the fire) and water make this connection difficult to identify. The boundary of this wetland area included a steep gradient to the northwest and west and bare ground as indicated in SP-9 (Photo Area 8).

Soil Pit 9

Soil Pit 9 (SP-9) was established to the west of Work Area 1 near the northwestern area of the Project site. SP-9 revealed a two-layer soil profile: A) 0 to 4 inch layer: sandy loam soil with no distinct redox features; and B) 5 to 18 inches of sand. The soils of SP-9 do not meet the requirements for indicators of hydric soils.

The habitat surrounding SP-9 is Black Willow Thicket to the west and Freshwater Forested/Shrub Wetland comprised to the east. Hydrophytic vegetation within this area included emergent mature *Salix gooddingii* (FACW) and *Populus fremontii* (N/A). Understory shrubs and emergent vegetation were scarce due to fire damage. However, the trees showed signs of life with emergent willow sprouting from the base of the trees (Photo Area 9). Upland vegetation in this area included deerweed (*Acmispon glaber*). Exotic vegetation included horseweed (*Erigeron canadensis*) and shortpod mustard.

Hydrological indicators include distinct drainage patterns in wetlands only. This area is on a steeper gradient that is likely not inundated with water for a duration that would create hydric conditions in soils.

Soil Pit 10

Soil Pit 10 (SP-10) was established to the west of Work Area 1 near the southwestern area of the Project site. SP-10 revealed a single-layer soil profile: A) 0 to 12 inch layer of cobble and sand likely deposited as fill material. The soils of SP-10 do not meet the requirements for indicators of hydric soils.

The habitat surrounding SP-10 is Black Willow Thicket and Disturbed/Developed. Hydrophytic vegetation within this area included emergent mature *Salix gooddingii* (FACW). Exotic vegetation included emergent carob (*Ceratonia siliqua*). Fill has been brought in to this area to support the trails located along the concrete channel (see photo for Soil Pit 10). Hydrological indicators were not identified at this location. This area is above a steep gradient that is not inundated with water.

Soil Pit 11

Soil Pit 11 (SP-11) was established in Work Area 2 near the eastern boundary of the basin, at the proposed pump station. SP-11 revealed a single-layer soil profile: A) 0 to 16 inch layer: sandy-clay loam soil with distinct 20 percent redox features with a chroma/value of 5YR 4/6. The soils of SP-11 meet the F6 – Redox Dark Surface indicators of hydric soils. The soils are mixed with fill material but exhibit strong redox feature characteristics.

The habitat surrounding SP-11 is sparsely scattered Freshwater Forested/Shrub Wetland comprised of Black Willow Thicket along the banks and open water to the west. Hydrophytic vegetation within this wetland area included mature *Salix gooddingii* (FACW) and *Baccharis salicifolia* (FAC) vegetation. Exotic vegetation included castor bean, shortpod mustard, and non-native grasses.

Hydrological indicators include surface water and high water table located downslope from SP-11. The boundary of the wetland was confirmed by a lack of vegetation and presence of and open water to the west (see Photo Area 13 and 14). Based on aerial imagery (Google 2013), this area is typically inundated with water.

Test Pits

Nearly a hundred test pits were dug to investigate soils and determine wetland boundaries. This included in areas that did not host riparian/wetland vegetation and areas previously inundated with water.

Many test pits were investigated at the San Gabriel River near the outlet structure area. The site was dominated by Disturbed Mule Fat Thicket with small mule fat species sparsely scattered throughout the site (Photo Area 15). The majority of the site was comprised of bare ground and emergent exotic vegetation. No wetland vegetation was identified at this location. An existing concrete access road from the bike trail down to the river will be used for access to the outlet structure. The banks of the river channel are developed and consist of grouted rip rap (Photo Area 15). Only the new outlet structure would be exposed to the San Gabriel River at the base of the rip-rap.

Figure 3

**Peck Water Conservation
Improvement Project
Jurisdictional Delineation Results Map
USACE & RWQCB**

Legend

Project Features

- Pipeline Alignment
- Pump Station and Intake Structure
- Excavation Area
- Staging Area
- Biological Survey Boundary

Jurisdiction Delineation

- USACE & RWQCB Jurisdiction
- OHWM
- Soil Pit

Wetland/Riparian Vegetation

- Freshwater Forested/Shrub Wetland
- Freshwater Emergent Wetland
- Open Water
- Black Willow Thicket
- Disturbed Mulefat Thickets
- Erosional Feature
- Culvert

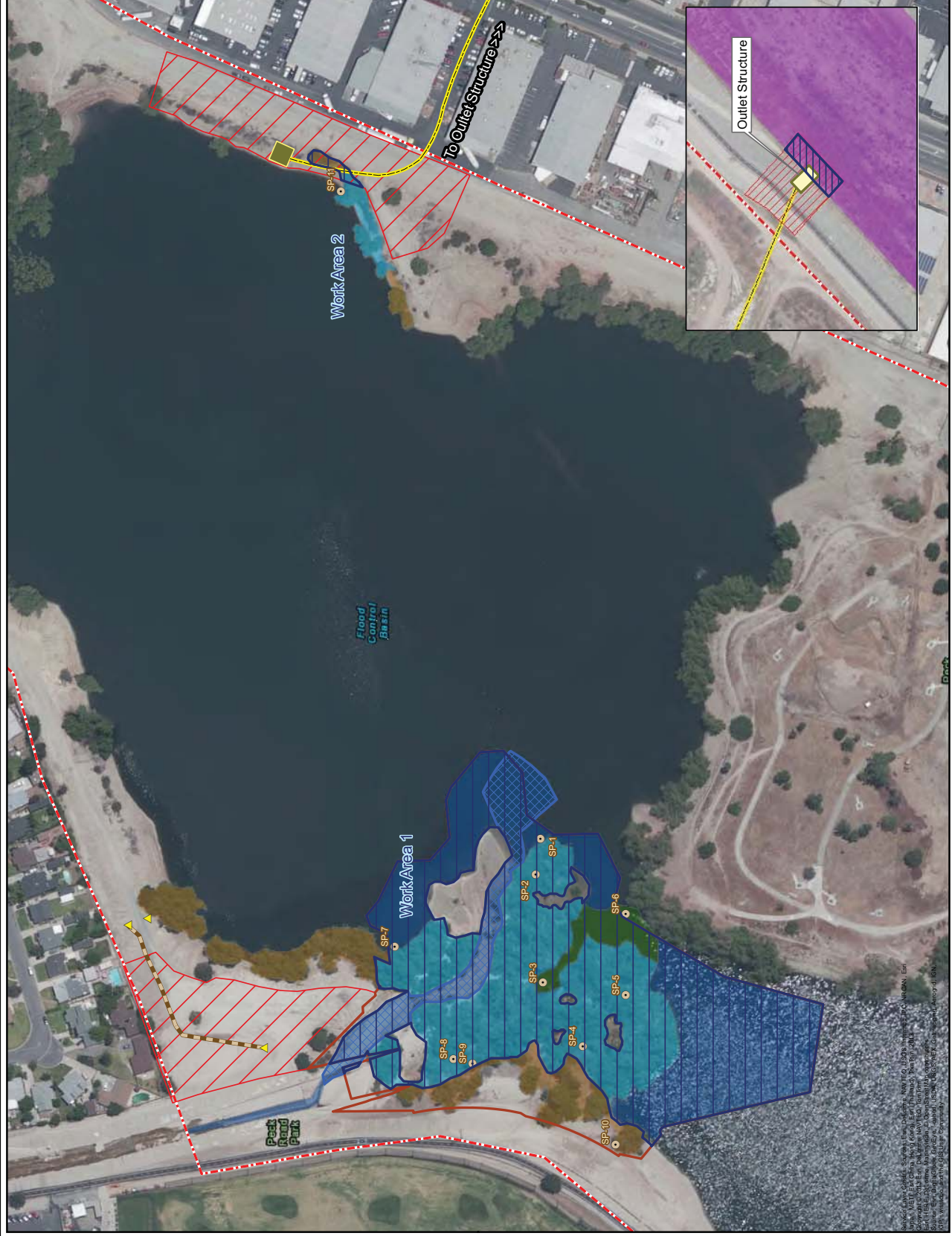


Figure 4

**Peck Water Conservation
Improvement Project
Jurisdictional Delineation Results Map
CDFW**

Legend

Project Features

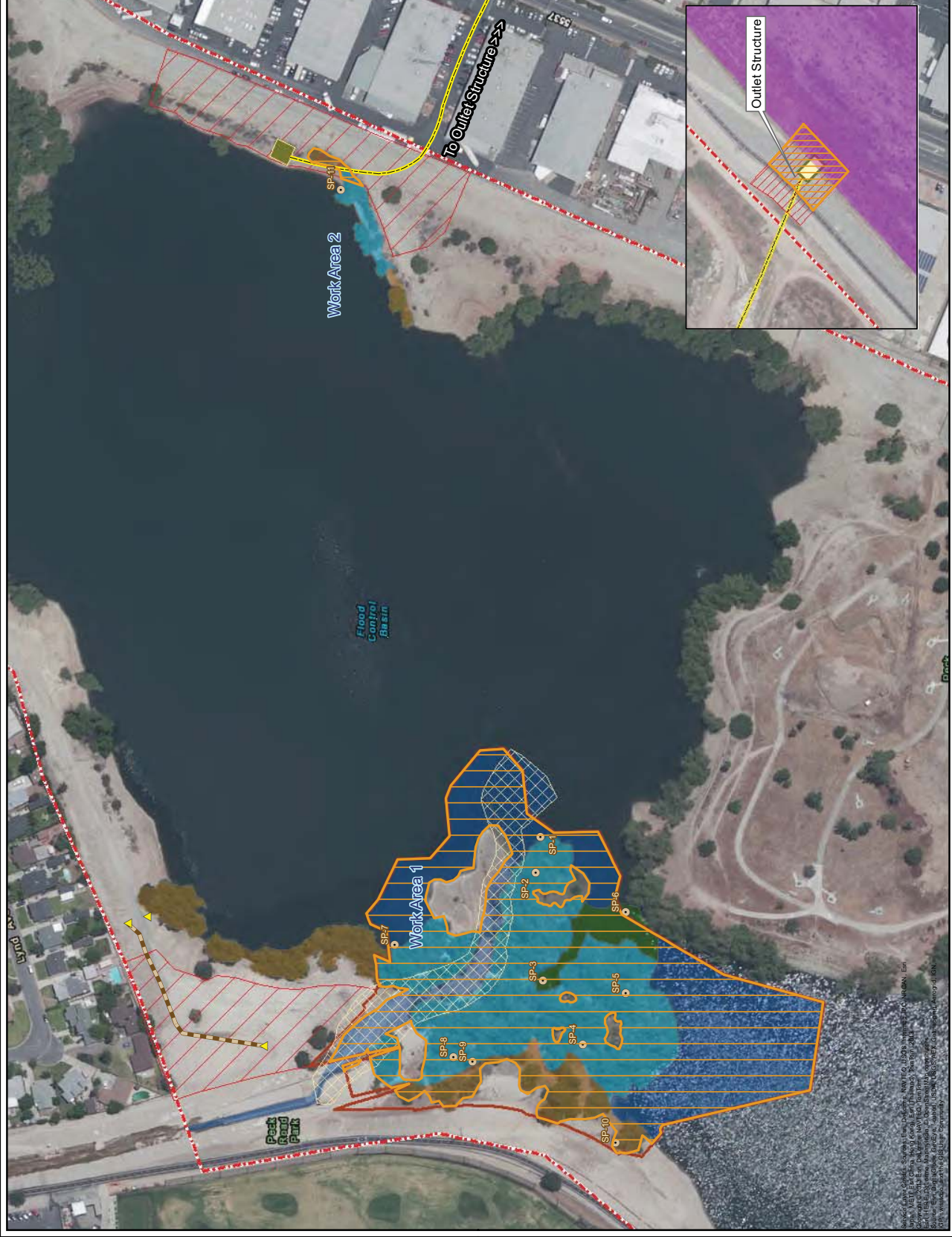
- Pipeline Alignment
- Pump Station and Intake Structure
- Excavation Area
- Staging Area
- Biological Survey Boundary

Jurisdictional Delineation

- CDFW
- Bank-to-Bank
- Soil Pit

Wetland/Riparian Vegetation

- Freshwater Forested/Shrub Wetland
- Freshwater Emergent Wetland
- Open Water
- Black Willow Thicket
- Disturbed Mulefat Thickets
- Erosional Feature
- Culvert



5.6 OTHER WATERS

Santa Anita Wash outlet enters the basin from the north and has accumulated sediment at the outlet. This drainage flows in a southeastern direction toward the basin, with accumulated sediment covering approximately 686 linear feet of the wash with varying widths and depths.

Substrates within the Santa Anita Wash drainage as it enters the basin include a mixture of cobble, silts, and a heavy dominance in fine sands. At the northern end of the outlet, the concrete lined outlet has been buried by heavy sand deposits. Scattered emergent willows exist but will likely be scoured out or buried during future rain events. No mature vegetation exists in this portion of the channel. Mature Black Willow Thicket occurs on the banks of the channel.

Consideration of water levels was taken into account during the survey and analysis. Even though 2012 and 2013 were considered dry for southern California, Chambers Group used 2013 data to analyze the amount of open water within the excavation area in comparison to the extreme 2014 drought conditions. Based on aerial images (Google 2013) and surveys conducted by Chambers Group (2013), water levels were higher in 2013. This is evident for Soil Pits 1, 6, and 7 which under the dry conditions of 2013, would have been located in open water.

One non-jurisdictional erosional feature approximately 372 linear feet exists in the northern area of the basin in the staging area. This erosional feature was created by residential runoff from the north entering the basin area through a system of 1.5 feet wide corrugated metal culverts. The road is continually maintained, and these erosional features appear to be leveled during maintenance.

The proposed outlet structure in the San Gabriel River is located at the base of the grouted rip rap in a Developed/disturbed area. Only the newly constructed outlet structure would be exposed to the river. No hydric soils or riparian vegetation is within the proposed work area. No sediment removal from the river is anticipated.

5.6.1 Waters of the US

The basin is located within the Rio Hondo Channel and connects with the Los Angeles River eventually terminating into the Pacific Ocean, recognized as a TNW. A significant nexus analysis was performed to determine potential USACE jurisdiction as required by current regulations.

A significant nexus was determined to exist for the Project based on the following facts:

- The Rio Hondo are RPW and are hydrologically connected to a TNW (Pacific Ocean). RPWs, by definition, are USACE-jurisdictional
- The drainage has the capacity to carry pollutants, nutrients, and organic carbon to the nearest TNW
- The nutrients and organic carbon support in-stream and downstream food webs.

The OHWM for the Santa Anita Wash outlet channel ranged from 1.5 to 28.5 feet in width, and 0.1 to 3.1 feet in depth. At the southeastern end where the channel terminates in the open water of the basin, the OHWM spread out in fan shape and ranged from 32.4 to 121.1 feet in width, and 0.1 feet in depth.

Of the approximately 0.69 acre of drainage feature under USACE jurisdiction within the Project site, approximately 0.61 acre is located in Work Area 1 and approximately 0.08 acre is located in the San Gabriel River. Approximately 0.07 acre in the San Gabriel River will be temporarily impacted, and approximately 0.61 acre in Work Area 1 and 0.01 acre in the San Gabriel River will be permanently impacted.

Approximately 3.14 acres of open water are located within Work Area 1 and fall under USACE jurisdiction; temporary impacts will occur to all 3.14 acres.

Of the approximately 3.18 acres of wetland under USACE jurisdiction within the Project site, approximately 3.14 acres are located within Work Area 1, and approximately 0.04 acre of wetland is located within Work Area 2. The approximately 0.04 acre in Work Area 2 will be temporarily impacted and the 3.14 acres in Work Area 1 will be permanently impacted.

One erosional feature approximately 372 feet in length is located in the northern area of the basin in the staging area. Erosional features are not under the jurisdiction of USACE. Table 1 summarizes the area of Waters of the US under the jurisdiction of the USACE to be impacted by this Project.

5.6.2 Waters of the State

Regional Water Quality Control Board

The Project could affect the quantity and/or quality of surface and/or ground waters of the Rio Hondo Channel. The limit of the RWQCB jurisdiction includes the basin and associated wetlands, and the area within the OHWM of the observed drainage, which are RPWs that are hydrologically connected to a TNW.

Of the approximately 0.69 acre of drainage feature under RWQCB jurisdiction within the Project site, approximately 0.61 acre is located in Work Area 1 and approximately 0.08 acre is located in the San Gabriel River. Approximately 0.07 acre in the San Gabriel River will be temporarily impacted, and approximately 0.61 acre in Work Area 1 and 0.01 acre in the San Gabriel River will be permanently impacted.

Approximately 3.14 acres of open water are located within Work Area 1 and fall under RWQCB jurisdiction; temporary impacts will occur to all 3.14 acres.

Of the approximately 3.18 acres of wetland under RWQCB jurisdiction within the Project site, approximately 3.14 acres are located within Work Area 1, and approximately 0.04 acre of wetland is located within Work Area 2. The approximately 0.04 acre in Work Area 2 will be temporarily impacted and the 3.14 acres in Work Area 1 will be permanently impacted.

One erosional feature approximately 372 feet in length is located in the northern area of the basin in the staging area. Erosional features are generally not under the jurisdiction of RWQCB. Table 1 summarizes the area of Waters of the State under the jurisdiction of the RWQCB to be impacted by this Project.

California Department of Fish and Wildlife

Waters of the State under the jurisdiction of the CDFW were field-delineated as the area within the top of the banks and an associated vegetation dripline, and the basin area that holds water, and associated

wetlands. The Santa Anita Wash outlet is within the Project site and contains associated riparian vegetated banks along the wash channel. The bank to bank measurements for the Santa Anita Wash outlet channel ranged from 3 to 55 feet in width, and 0.1 to 16 feet in depth. At the southeastern end where the channel terminates in the open water of the basin, the bank to bank spread out in fan shape and ranged from 65 to 121 feet in width, and 0.1 to 4 feet in depth.

Of the approximately 0.82 acre of Waters of the State that exists as a drainage feature within the Project site, approximately 0.61 acre are located in Work Area 1 and 0.21 acre rip-rap are located in the San Gabriel River. Of these drainage features, approximately 0.21 acre in the San Gabriel River will be temporarily impacted and approximately 0.61 acre in Work Area 1 will be permanently impacted.

Approximately 3.14 acres of open water are located within Work Area 1 and fall under CDFW jurisdiction; temporary impacts will occur to all 3.14 acres.

Approximately 3.79 acres of vegetation under CDFW jurisdiction within the Project site, 3.67 acres are located within Work Area 1, 0.04 acre is located within Work Area 2, and 0.08 are located in the San Gabriel River. Table 2 summarizes the area of Waters of the State under the jurisdiction of the CDFW to be impacted by this Project.

SECTION 6.0 – CONCLUSION

Table 1 and 2 provide summaries of acreages of Jurisdictional Waters under RWQCB, USACE, and CDFW that occur within the Project footprint.

Table 1 RWQCB and USACE Jurisdictional Areas

Work Area 1	Temporary	Permanent	Total
Freshwater Emergent Wetland	n/a	0.25	0.25
Freshwater Forested/Shrub Wetland	n/a	2.89	2.89
Open Water	3.14	n/a	3.14
Drainage Feature	n/a	0.61	0.61
Total	3.14	3.75	6.89
Work Area 2	Temporary	Permanent	Total
Freshwater Forested/Shrub Wetland	0.04	n/a	0.04
Drainage Feature	n/a	n/a	n/a
Total	0.04	n/a	0.04
San Gabriel River	Temporary	Permanent	Total
Drainage Feature (OHWM)	0.07	0.01	0.08
Total for Temporary and Permanent Impacts			7.01

Table 2 CDFW Jurisdictional Areas

Work Area 1	Temporary	Permanent	Totals
Open Water	3.14	n/a	3.14
Vegetation Under CDFW Jurisdiction	n/a	3.67	3.67
Drainage Feature	n/a	0.61	0.61
Total	3.14	4.28	7.42
Work Area 2	Temporary	Permanent	Totals
Vegetation Under CDFW Jurisdiction	0.04	0.002	0.04
Open Water	n/a	n/a	n/a
Drainage Feature	n/a	n/a	n/a
Total	0.04	0.002	0.04
San Gabriel River	Temporary	Permanent	Totals
Vegetation Under CDFW Jurisdiction (within the OHWM)	0.07	0.01	0.08
Drainage (bank to bank rip/rap)	0.21	n/a	0.21
Total	0.28	0.01	0.29
Total for Temporary and Permanent Impacts			7.75

6.1 FEDERAL PERMITS

The USACE regulates the discharge of excavated material out of waters of the United States under the Section 404 of the CWA. Sediment materials will be removed from Waters of the U.S. and associated wetlands as a result of this Project; therefore a Section 404 permit pursuant to the CWA is required.

6.2 STATE PERMITS

Under Section 401 of the CWA, the RWQCB regulates any activity that requires a federal permit for discharges to a water body. This Project will require a RWQCB-issued Section 401 Certification for impacts to Waters of the State because materials will be removed from the water body and will likely result in the discharge of sediments.

CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake which supports fish or wildlife. The Project plans to remove materials from a basin (lake) which does support aquatic wildlife. CDFW will require a Section 1602 Agreement pursuant to the Lake and Streambed Alteration Program for impacts relating to the Waters of the State.

6.3 RECOMMENDATIONS

It is recommended that LACDPW continue coordination efforts with the appropriate regulatory agencies to determine the preferred mitigation strategy for potential impacts to wetland habitat, Waters of the

U.S. and Waters of the State. Actual mitigation required and mitigation ratios will be determined by, and in coordination with, the regulatory agencies.

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APPENDIX A – SITE PHOTOGRAPHS



APPENDIX A – SITE PHOTOGRAPHS



Photo Area 1.

This picture was taken outside of the eastern portion of Work Area 1 facing southwest. This area exhibited sparse vegetation within sandy substrates. Based on aerial imagery (Google 2013), this area is typically inundated with water even in drier year conditions. Note the sediment that has accumulated in the area.



Photo Area 2.

This picture was taken at the waterline facing north toward the Santa Anita Wash outlet into the basin. Soils here were composed of sands and did not display hydric characteristics. Based on aerial imagery (Google 2013), this area is typically inundated with water even in drier year conditions.



Photo Area 3.

This picture was taken near SP-1 facing south at the eastern boundary of Work Area 1. Note the trash and debris from the numerous homeless encampments in the area. Soils here were displayed hydric characteristics. Based on aerial imagery (Google 2013), this area is typically inundated with water even in drier year conditions. Dead pond turtles and fish were observed in the area.



Photo Area 4.

This picture was taken within the eastern portion of Work Area 1 facing west near SP-2. A layer of ash from the 2013 fire made hydrological layers difficult to discern. Note the lack of vegetated understory and emergent (green) willows sprouting from the base of the black willow.



Photo Area 5.

This picture was taken near SP-3 facing west. Based on the fire damaged vegetation, this area hosted herbaceous emergent wetland species including mule fat, young willows, and sedges.



Photo Area 5.

This picture was taken near SP-3 facing east in the same location as photo above. Note the burned stand of mule fat and the drainage pattern in wetlands found in this area (bank formations). Based on aerial imagery (Google 2013), this area is typically inundated with water even in drier year conditions.



Photo Area 6.

This picture was taken within the central portion of Work Area 1 facing northeast near SP-4. A layer of ash from the 2013 fire made hydrological layers difficult to discern. Sandy substrates were found approximately 12 inches below the hydric soils. Many homeless encampments were found in this area.



Photo Area 7.

This picture was taken near SP-7 facing east at the northeastern boundary of Work Area 1. Based on aerial imagery (Google 2013), this area is typically inundated with water even in drier year conditions (note sandy banks in background of photo).



Photo Area 8.

This picture was taken near SP-8 facing east within the northern area and western boundary of Work Area 1. Based on the drainage patterns in wetland (bank formation), this area is likely ponded from the basin in wetter years, likely connecting to SP-3. However, the destruction of herbaceous vegetation from the fire made this determination difficult. Emergent willows are recovering from the fire damage.



Photo Area 9.

This picture was taken within the northern portion of Work Area 1 facing south near SP-9. This area is located on a steep gradient/shelf above SP-8. The soils are comprised of sand and do now demonstrate hydric characteristics. SP-9 provided confirmation of the Work Area 1 western boundary.



Photo Area 10.

This picture was taken at the downstream limit of the Santa Anita Wash outlet into the basin area facing northwest. The width of this area was measured at approximately 121 feet wide. Based on aerial imagery (Google 2013), this area is typically inundated with water even in drier year conditions.



Photo Area 11.

This picture was taken approximately 220 feet upstream of Photo Area 10 within the Santa Anita Wash outlet facing southeast. Sandy substrates are dominant throughout the wash with non-native species including castor bean and tree tobacco along the banks with a few scattered native emergent willows and mule fat.



Photo Area 12.

This picture was taken north of the Project site looking south towards Work Area 1. Based on engineering plans, this area is concrete lined but has been covered with cobble, sand, and riparian vegetation.



Photo Area 13.

This picture was taken on the east bank of the basin near the pipeline alignment in Work Area 2 facing northeast. SP-11 is located at the base of the willow in this photo. Note the steep bank of the basin. The staging area will be located in this area outside the wetland/riparian area.



Photo Area 14.

This picture was taken on the east bank of the basin at the pump station and intake structure location, looking southwest towards SP-11 and Work Area 2. Soils exhibited hydric characteristics near the pictured willow and were mixed with cobble/sand from steep banks. Work Area 2 is a thin strip of wetland with scattered vegetation along the banks of the basin.



Soil Pit 5.

This picture was taken within the southern portion of Work Area 1 facing southeast. Many homeless encampments and trails were prevalent here, and clearance of vegetation was evident.



Soil Pit 6.

This picture was taken west of the Project within the southern area of Work Area 1. Emergent wetland vegetation and Gley soils currently exists in this area; however, typically this area would be under water and would not support vegetation.



Soil Pit 10.

This picture was taken on the west bank of the basin near SP-10 outside of the western boundary of Work Area 1. This area is located on the upper shelf of the basin. Soils were comprised of gravel and sands and did not exhibit hydric characteristics.



Photo Area 15.

This picture was taken within the San Gabriel River at the proposed outlet structure. The outlet will be exposed to the river at the edge of the rip rap. The loam soils were mixed with cobble/rock and did not exhibit hydric characteristics.



Photo Area 15.

This picture was taken within the San Gabriel River at the proposed outlet structure from the top of the existing access road. This area of the outlet structure is developed with concrete access road and grouted rip rap. The outlet will be exposed to the river at the edge of the rip rap.

APPENDIX B – WETLAND DATA SHEETS



WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd. City/County: Ardenia / LA County Sampling Date: 2/25/14
 Applicant/Owner: LACDPW State: CA Sampling Point: 1
 Investigator(s): PM JK Section, Township, Range: SAN FRANCISCO - Dalton, 01, 11W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%):
 Subregion (LRR): C Lat: 34.10251635 Long: -118.01390456 Datum: NAD83
 Soil Map Unit Name: NIA NWI classification: freshwater forested shrub wetland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)														
1. <u>black willow</u>	<u>55</u>	<u>YES</u>	<u>FACW</u>															
2. <u>red willow</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u>75</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>3</u></td> <td>x 2 = <u>6</u></td> </tr> <tr> <td>FAC species <u>1</u></td> <td>x 3 = <u>3</u></td> </tr> <tr> <td>FACU species <u>3</u></td> <td>x 4 = <u>12</u></td> </tr> <tr> <td>UPL species <u>—</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>7</u> (A)</td> <td><u>21</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>3</u>	x 2 = <u>6</u>	FAC species <u>1</u>	x 3 = <u>3</u>	FACU species <u>3</u>	x 4 = <u>12</u>	UPL species <u>—</u>	x 5 = <u>0</u>	Column Totals: <u>7</u> (A)	<u>21</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>3</u>	x 2 = <u>6</u>																	
FAC species <u>1</u>	x 3 = <u>3</u>																	
FACU species <u>3</u>	x 4 = <u>12</u>																	
UPL species <u>—</u>	x 5 = <u>0</u>																	
Column Totals: <u>7</u> (A)	<u>21</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u> </u>)																		
1. <u>emergent willow (blk, red)</u>	<u>5</u>	<u>YES</u>	<u>FACW</u>															
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u>5</u> = Total Cover																		
Herb Stratum (Plot size: <u>30' x 30'</u>)																		
1. <u>cupressus</u>	<u>2</u>	<u>NO</u>	<u>FACU</u>															
2. <u>lupinus g. - lepidum latifolium</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u>5</u>	<u>NO</u>	<u> </u>															
5. <u> </u>	<u>2</u>	<u>NO</u>	<u>FACU</u>															
6. <u>legume condensata</u>	<u>30</u>	<u>YES</u>	<u>FACU</u>															
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u>69</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u> </u>)																		
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u> </u> = Total Cover																		
% Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>																		
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: <u>No fire damage, appears this area is typically under water in non-drought conditions. Lots of trash and debris from homeless.</u>																		

SOIL

Sampling Point: #1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	7.5 Yr 3/2	90	5 Yr 4/6	10	C	M	Sandy-clay loam	Sandy/organic layer
2-10	7.5 Yr 3/2	85	2.5 Yr 3/6	15	C	P	Sandy-clay loam	less organic
10+							sand	Sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☒ Water Marks (B1) (Nonriverine)
☒ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☒ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☒ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☒ Depth (inches): _____
 Water Table Present? Yes ☒ No ☒ Depth (inches): _____
 Saturation Present? Yes _____ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 9' from water edge. Dead possum and dead sick deer along

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd. City/County: Aransas Co county Sampling Date: 2/25/14
 Applicant/Owner: LACDPW State: TX Sampling Point: 2
 Investigator(s): PM, JK Section, Township, Range: San Francisco - Dalton, 01, 11W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%):
 Subregion (LRR): C Lat: 34.10253768 Long: -118.01411484 Datum: NAD83
 Soil Map Unit Name: V/A NWI classification: Freshwater forested shrub wet.

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation Yes, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
1. <u>Black Willow</u>	<u>60</u>	<u>YES</u>	<u>FACW</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>3</u> (A) <u>8</u> (B) Prevalence Index = B/A = <u>2.66</u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
= Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u>Emergent Willow (Bk)</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Caster Bean</u>	<u>2</u>	<u>NO</u>	<u>FACU</u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Remarks:
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
= Total Cover				
Herb Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u>Marah macrocarpa (cucumber)</u>	<u>2</u>	<u>YES</u>	<u>N/A</u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
= Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
= Total Cover				
% Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>				

Sampling Point: #2

HYDROLOGY

Primary Indicators (minimum of one required; check all that apply)

Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd. City/County: Arundata / LA County Sampling Date: 2/25/14
 Applicant/Owner: LA CDDPW State: CA Sampling Point: 3
 Investigator(s): PM JK Section, Township, Range: San Francisco - Dalton, 01, 11W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope (%):
 Subregion (LRR): Lat: 34.10249734 Long: -118.01476022 Datum: NAD 83
 Soil Map Unit Name: N/A NWI classification: Freshwater forested shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.8</u> (A/B)
1. <u>Black Willow</u>	<u>20</u>	<u>Yes</u>	<u>PACW</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>20</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>3</u> x 2 = <u>6</u> FAC species <u>4</u> x 3 = <u>12</u> FACU species <u>3</u> x 4 = <u>12</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>10</u> (A) <u>30</u> (B) Prevalence Index = B/A = <u>3</u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u>Emergent Black Willow</u>	<u>15</u>	<u>Yes</u>	<u>PACW</u>	
2. <u>Mulefat</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Cocklebur</u>	<u>5</u>	<u>No</u>	<u>PAC</u>	
4. <u>Leymus condensatus</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
5. <u>Caster Bean</u>	<u>7</u>	<u>No</u>	<u>FACU</u>	
<u>42</u> = Total Cover				
Herb Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Non native grasses</u>	<u>2</u>	<u>Yes</u>	<u> </u>	
2. <u>E. aculeatus</u>	<u>2</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Isotria medeoloides</u>	<u>1</u>	<u>No</u>	<u>FACW</u>	
4. <u>Leptochloa</u>	<u>2</u>	<u>Yes</u>	<u>FAC</u>	
5. <u>Edmonstone Nightshade (douglas Nightshade)</u>	<u>1</u>	<u>No</u>	<u>FAC</u>	
6. <u>Hirschfeldia? 1. Shortpod mustard</u>	<u>1</u>	<u>No</u>	<u>N/A</u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>10</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <u>Area burned by fire - likely a herbaceous/shrub emergent wetland area. willows on banks.</u>				

Sampling Point: #3

HYDROLOGY			
Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Drainage area - no flow, but depression w/ bank 2 bank formation			

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd. City/County: Arcadia / LA county Sampling Date: 2/25/14
 Applicant/Owner: LA CDPW State: CA Sampling Point: 4
 Investigator(s): PM JR Section, Township, Range: SAN FRANCISCO - Dalton, 01, 11W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope (%):
 Subregion (LRR): C Lat: 34.10229003 Long: -118.01513402 Datum: NAD 83
 Soil Map Unit Name: VIA NWI classification: freshwater forested shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation Yes, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.6</u> (A/B)
1. <u>Black Willow</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>30</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u>0</u> x 1 = <u> </u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>2</u> x 3 = <u>6</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>5</u> (A) <u>14</u> (B) Prevalence Index = B/A = <u>2.8</u>
Sapling/Shrub Stratum (Plot size: <u> </u>) 1. <u>Emergent Black Willow</u> <u>15</u> <u>Yes</u> <u>FACW</u> 2. <u>Caster Bean</u> <u>5</u> <u>Yes</u> <u>FACU</u> 3. <u>California Rose</u> <u>5</u> <u>Yes</u> <u>FAC</u> 4. <u>Mulefat</u> <u>2</u> <u>No</u> <u>FAC</u> 5. <u> </u> <u> </u> <u> </u> <u> </u>				
<u>22</u> = Total Cover				
Herb Stratum (Plot size: <u> </u>) 1. <u>Horseshoe</u> <u>5</u> <u>Yes</u> <u>N/A</u> 2. <u>Non native Grasses</u> <u>2</u> <u>No</u> <u>N/A</u> 3. <u> </u> <u> </u> <u> </u> <u> </u> 4. <u> </u> <u> </u> <u> </u> <u> </u> 5. <u> </u> <u> </u> <u> </u> <u> </u> 6. <u> </u> <u> </u> <u> </u> <u> </u> 7. <u> </u> <u> </u> <u> </u> <u> </u> 8. <u> </u> <u> </u> <u> </u> <u> </u>				
<u>7</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>) 1. <u> </u> <u> </u> <u> </u> <u> </u> 2. <u> </u> <u> </u> <u> </u> <u> </u> 3. <u> </u> <u> </u> <u> </u> <u> </u> 4. <u> </u> <u> </u> <u> </u> <u> </u> 5. <u> </u> <u> </u> <u> </u> <u> </u> 6. <u> </u> <u> </u> <u> </u> <u> </u> 7. <u> </u> <u> </u> <u> </u> <u> </u> 8. <u> </u> <u> </u> <u> </u> <u> </u>				
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>				
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks:				

Sampling Point: ~~#~~ 4

HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: 0 - 0.5 layer of ash and disturbance make hydrology difficult to discern. (cinch)			

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd. City/County: Arizona / LA County Sampling Date: 2/25/14
 Applicant/Owner: LAOPW State: CA Sampling Point: 5
 Investigator(s): PM JK Section, Township, Range: San Francisco - Dalton, 01, 11W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%):
 Subregion (LRR): C Lat: 34.10208505 Long: -116.01482874 Datum: NAD 83
 Soil Map Unit Name: N/A NWI classification: Preserve for Forested Shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation yes, Soil yes, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>large fire burned through area in 2013. This fire removed shrubs and herbaceous understory and a 0-0.5 inch layer of ash covers hydrological indicators. heavy disturbances (harden, ash) hide hydrological indicators.</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
1. <u>Black Willow</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>2</u> x 3 = <u>6</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>4</u> (A) <u>10</u> (B) Prevalence Index = B/A = <u>2.5</u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u>Emergent Black Willow</u>	<u>15</u>	<u>yes</u>	<u>FACW</u>	
2. <u>Mulefat</u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	Remarks:
3. <u>Cocklebur</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
= Total Cover				
Herb Stratum (Plot size: <u> </u>)				Remarks:
1. <u>Hoar. Mustard</u>	<u>5</u>	<u>yes</u>	<u>N/A</u>	
2. <u>Non native Grass</u>	<u>2</u>	<u>no</u>	<u>N/A</u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
= Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				Remarks:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
= Total Cover				
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			

SOIL

Sampling Point: #5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-3	7.5 Yr 3/2	90	5 Yr 4/6	10	C	M	sandy-clay loam	sandy/organic layer
3-5	sand	—	—	—	—	—	sand	sand
5-12	7.5 Yr 3/2	90	5 Yr 4/6	10	C	M	sandy-clay loam	sandy/organic layer
12+	—	—	—	—	—	—	sand	sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☒ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 0-0.5 inches of ash and disturbance make hydrology difficult to discern. If disturbances were not present, this area would demonstrate hydrological indicators as observed in general area.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd. City/County: Arundin / LA County Sampling Date: 2/25/14
 Applicant/Owner: LACDPW State: CA Sampling Point: 6
 Investigator(s): PM JK Section, Township, Range: San Francisco - Dalton, 01, 11W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): CONCAVE Slope (%):
 Subregion (LRR): C Lat: 34.10209063 Long: -118.01434507 Datum: NAD83
 Soil Map Unit Name: M14 NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>✓</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>✓</u> No <u> </u>
Hydric Soil Present?	Yes <u> </u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>✓</u> No <u> </u>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.5</u> (A/B)
1. <u>Black Willow</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>4</u> x 3 = <u>12</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>8</u> (A) <u>20</u> (B) Prevalence Index = B/A = <u>2.5</u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u>Emergent Black Willow</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
2. <u>Mulefat</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Leucos C.</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Black Willow Cocklebur</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
5. <u>tree tobacco</u>	<u>2</u>	<u>NO</u>	<u>FAC</u>	
<u>42</u> = Total Cover				
Herb Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators: <u>✓</u> Dominance Test is >50% <u>✓</u> Prevalence Index is ≤3.0' <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Pepper. Lepidium</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Non native Grasses</u>	<u>5</u>	<u>NO</u>	<u>NA</u>	
3. <u>Algae</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>40</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>✓</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>				
Remarks:				

Sampling Point: #6

HYDROLOGY

Wetland Hydrology Indicators:

US Army Corps of Engineers

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd. City/County: Arden / LA County Sampling Date: 2/25/14
 Applicant/Owner: LACDPW State: CA Sampling Point: 7
 Investigator(s): PM JK Section, Township, Range: San Francisco - Dalton, 01, 11W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%):
 Subregion (LRR): C Lat: 34.10323348 Long: -118.01455199 Datum: NAD83
 Soil Map Unit Name: r1A NWI classification: Freshwater Forested Shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.8</u> (A/B)
1. <u>blk willow</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>	
2. <u>cottonwood</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u>0</u> x 1 = <u> </u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>6</u> (A) <u>21</u> (B) Prevalence Index = B/A = <u>2.6</u>
Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>cockerberry</u>	<u>20</u>	<u>YES</u>	<u>PAC</u>	
2. <u>lepidol</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	
3. <u>blk willow</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>	
4. <u>cottonwood</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
5. <u>tree tobacco</u>	<u>2</u>	<u>NO</u>	<u>FAC</u>	
<u>52</u> = Total Cover				
Herb Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>PNB</u>	<u>10</u>	<u>YES</u>	<u>—</u>	
2. <u>evening primrose (Douglas)</u>	<u>1</u>	<u>NO</u>	<u>FAC</u>	
3. <u>leymus c.</u>	<u>2</u>	<u>NO</u>	<u>FACW</u>	
4. <u>shortleaf mustard</u>	<u>2</u>	<u>NO</u>	<u>—</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>15</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:				

Sampling Point: 7

HYDROLOGY

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input checked="" type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: This week went good

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd. City/County: Arundel / LA Sampling Date: 2/25/14
 Applicant/Owner: LACOPW State: LA Sampling Point: 8
 Investigator(s): pm jk Section, Township, Range: San Francisco - Dutton, 01, 11W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%):
 Subregion (LRR): C Lat: 34.10293682 Long: -118.01521912 Datum: NAD 83
 Soil Map Unit Name: N/A NWI classification: freshwater forested shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation Yes, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Black Willow</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>2</u> x 3 = <u>6</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>5</u> (A) <u>14</u> (B) Prevalence Index = B/A = <u>2.8</u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0' <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u>Emergent Black Willow</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Sambucus</u>	<u>1</u>	<u>NO</u>	<u>FAC</u>	Remarks:
3. <u> </u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
4. <u>Caster Bean</u>	<u>2</u>	<u>NO</u>	<u>FACU</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
= Total Cover				
Herb Stratum (Plot size: <u> </u>)				Remarks:
1. <u>Non native Grass</u>	<u>2</u>	<u>Yes</u>	<u> </u>	
2. <u>Black Mustard</u>	<u>2</u>	<u>Yes</u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
= Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				Remarks:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
= Total Cover				
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			

Sampling Point: #8

HYDROLOGY

Primary Indicators (minimum of one required; check all that apply)

US Army Corps of Engineers

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd City/County: ArCADIA / CA Sampling Date: 2/25/14
 Applicant/Owner: LACDPW State: CA Sampling Point: 9
 Investigator(s): PM JK Section, Township, Range: SAN FRANCISCO - DALTON, 01, 11W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%):
 Subregion (LRR): C Lat: 34.10284186 Long: -118.01524479 Datum: NAD 83
 Soil Map Unit Name: N/A NWI classification: freshwater forested shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation YES, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A/B)
1. <u>Black Willow</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>	
2. <u>Black Willow cottonwood</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>25</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u>0</u> x 1 = <u> </u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>1</u> x 3 = <u>3</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u>4</u> (A) <u>11</u> (B) Prevalence Index = B/A = <u>2.75</u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u>Emergent Black Willow</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>	
2. <u>Horse weed</u>	<u>2</u>	<u>NO</u>	<u>FACU</u>	
3. <u>Deer weed</u>	<u>1</u>	<u>NO</u>	<u>N/A</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Herb Stratum (Plot size: <u> </u>)				
1. <u>Mirschfeldia</u>	<u>2</u>	<u>YES</u>	<u>N/A</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>				
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks:				

SOIL

Sampling Point: #9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	7.5 Yr 3/2	100	—	—	—	—	Sandy loam	
4+							Sand	Sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (Inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present? Yes _____ No _____	Depth (inches): _____	
Saturation Present? Yes _____ No _____	Depth (inches): _____	

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd. City/County: Arundel / LA Sampling Date: 2/25/14
 Applicant/Owner: LADPW State: LA Sampling Point: 10
 Investigator(s): PM JK Section, Township, Range: San Francisco-Dalton, 01, 11W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Slope (%):
 Subregion (LRR): C Lat: 34.10213001 Long: -118.01572015 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <u> </u> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <u> </u> No <input checked="" type="checkbox"/>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
1. <u>Black Willow</u>	<u>60</u>	<u>YES</u>	<u>FACW</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>60</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>2</u> (A) <u>4</u> (B) Prevalence Index = B/A = <u>2</u>
1. <u>Emergent Black Willow</u>	<u>2</u>	<u>YES</u>	<u>FACW</u>	
2. <u>Emergent carob</u>	<u>1</u>	<u>NO</u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>3</u> = Total Cover				
Herb Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <u> </u> ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>				
Remarks:				

SOIL

Sampling Point: #10

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Peck Rd City/County: Arcadia CA County Sampling Date: 11
 Applicant/Owner: LACOR State: CA Sampling Point: 11
 Investigator(s): PM HF Section, Township, Range: San Francisco - Dalton, 01, 11W
 Landform (hillslope, terrace, etc.): hillslope of lake Local relief (concave, convex, none): concave Slope (%): 45°
 Subregion (LRR): terrace Lat: 34.10353792 Long: -118.01005773 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: N/A Freshwater forested shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A/B)
1. <u>blt willow</u>	<u>75</u>	<u>YES</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>75</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = _____ FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>1</u> x 3 = <u>3</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>4</u> (A) <u>11</u> (B) Prevalence Index = B/A = <u>2.75</u>
Sapling/Shrub Stratum (Plot size: _____) 1. <u>mulefat</u> <u>20</u> <u>YES</u> <u>FAC</u> 2. <u>emergent blt willow</u> <u>5</u> <u>NO</u> <u>FACW</u> 3. <u>cassia bean</u> <u>2</u> <u>NO</u> <u>FACU</u> 4. _____ 5. _____ <u>27</u> = Total Cover				
Herb Stratum (Plot size: _____) 1. _____ 2. <u>PM6</u> <u>1</u> <u>YES</u> <u>—</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum <u>50</u> % Cover of Biotic Crust _____				
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks:				

Sampling Point:

HYDROLOGY

Primary Indicators (minimum of one required; check all that apply)

US Army Corps of Engineers